

## **Historic, archived document**

Do not assume content reflects current scientific knowledge, policies, or practices.



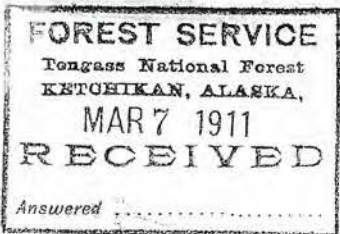
THE PROPOSED  
FOREST RESERVE ON THE KENAI PENINSULA  
ALASKA

---

By

W. A. LANGILLE  
Expert, Forest Service  
October - December, 1904

(SUPERVISOR'S FILES)



THE PROPOSED  
FOREST RESERVE ON THE KENAI PENINSULA  
ALASKA

----

By

W. A. LANGILLE

Expert, Forest Service

October--December, 1904



## THE PROPOSED FOREST RESERVE ON THE KENAI PENINSULA, ALASKA

-----

Pursuant to instructions from the Forester of the U. S. Department of Agriculture, an examination of the lands of the Kenai Peninsula was made by the writer, during the months of October and November, with some few extra days in December spent along the line of the railway leading from Seward.

Between Valdez and Seward travel was performed in the small steam launch "Annie" of Ellamar, Capt. James Bettels, owner and pilot.

After a few days spent near Seward, a dory was purchased on Kenai Lake, and the journey to Kenai, on Cook Inlet, made down the Kenai River and lakes in this boat, interrupted by an overland trip to the mining towns of Sunrise and Hope on Turnagain Arm. From Kenai, dory and outfit were taken on the S. S. Tyonic to Seldovia, where a native boy, Alsentí Roman, was employed as guide and packer. The journey to the head of Coal Bay was made in the boat, thence overland to Kussilof Lake and back, with side trips from different points along the shores of Coal Bay.

This itinerary covered all important points of the region except the ocean side of the peninsula from Seldovia to Resurrection Bay, the open sea being too rough at this time of the year to attempt coasting in a small boat along this rock-bound shore.

In the absence of any maps of the interior, except the charts, which are very erroneous as to the interior of the

peninsula, positions were determined as nearly as possible by estimating distance, and by compass bearings, and no great accuracy is claimed for them.

The writer is grateful for the uniform kindness and many considerations and courtesies shown by every one met, especially so to those who extended the hospitality of home and camp in true frontier style.

### Geography

The Kenai Peninsula is an elongated area of land lying in a general northeast and southwest direction, almost surrounded by the waters of Prince William Sound, the Pacific Ocean, Cook Inlet, and Turnagain Arm. It is situated between the 59th and 61st degrees of north latitude and the 148th and 152nd degrees of west longitude, and is 152 miles long, its greatest width being 11 miles, with an approximate area of 6,463 square miles, or 4,136,320 acres.

The word Kenai is the Russian term for summer land, and in the early history of their occupancy it was a well-populated region, rich in furs, abounding in game, and its waters teeming with salmon and other fish; its tolerable climate and system of penetrating waterways offering many inducements to these early explorers, which were utilized to the utmost.

The principal of these waterways are Coal Bay, Kussilof River and Lake, the Kenai River and Lakes, and Turnagain Arm, which almost severs the peninsula from the main land, and is noted for its extremely high tides, which rise over 45 feet.

The Kenai lakes, with the connecting rivers, nearly cross the peninsula in its widest part, being easily passable for small boats going down, but difficult of ascent, owing to the swift, rocky rapids, which are frequent. The Kussilof River is short and swift above tidewater, the lake an admirable sheet of water 30 miles long, reaching across the plateau land to the foot of the mountains.

Kachemak and Coal Bays are a deep indentation from Cook Inlet on the southwest end of the peninsula, while on the ocean side is a series of bays and harbors extending into and around the shores of Prince William Sound.

Resurrection Bay is the most important of these, being the terminus of the projected railway to the Yukon and other valleys of the interior; the others are little known, except Port Wells, noted for its large and numerous glaciers.

### Topography

In a general way the peninsula can be divided into two distinct topographic regions, the easterly, entirely mountainous, the western, an uneven plateau of varying elevations.

The mountainous portion is the greater, made up of a range of extremely rugged mountains, from 3,000 to 6,000 feet in altitude, the valleys for the most part ice-filled to a general elevation of 2,000 to 4,000 feet, the ice uniting in a compact body, with its tentacle-like arms spreading in every direction, large and more numerous on the coast side, where nearly every embayment

receives one of these living, moving ice tongues, some reaching to the waters, others backing a small area of useless glacial debris.

From Prince William Sound to Cape Elizabeth, the coast line is made up of steep, generally rough, rocky slopes rising to the sharp aretes above the ice-filled valleys and defiles, with a narrow fringe of forest clinging to the rocky, treacherous, surf-bound coast, while away from this is a desolate waste, as yet too new from the hands of nature to serve human needs.

Extending from the head of Resurrection Bay are two separate valleys reaching to the headquarters of the Kenai River, which cut in twain this ice-mantled range of mountains, making possible the construction of a railroad from a well-sheltered, deep-water harbor, free from ice the year round, through the only low pass unobstructed by glacial ice in this whole Alaskan coastal range. The valley followed by the railroad is narrow, uneven, and well-forested to the divide, 700 feet in altitude, then dropping to the Snow River Valley, thence to the Kenai Lake, the mountains rising steeply from this typical, U-shaped, glacial valley, until the stream reaches the plateau region.

The Resurrection River Valley from the junction of Bear Creek, 4 miles from the bay, is narrow, its floor a gravel flood plain, with poorly timbered slopes connecting with the valley of Russian River, a tributary of Kenai River, which enters between the two lakes. A series of narrow, forested valleys penetrates the lower ice-free mountains between the Kenai River and Turnagain

Arm, all containing auriferous gravels of more or less value, at present the most resourceful section of the peninsula, also giving the most promise for the future.

The Cook Inlet side of the peninsula is an uneven plateau, rising gradually from the shore line to the mountains, except where separated from the main range by Coal Bay.

The west shore line of this bay is a steep bluff 400 feet high, seamed with exposed coal veins dipping to the north. From this bluff the land rises with a gentle slope to a general elevation of 1,600 feet, its extreme height being about 2,000 feet on Caribou Mountain. The general elevation of 1,600 feet reaches well across toward the Inlet, an area free from surface rock or gravel, with a seemingly fertile organic soil, supporting a scattered forest growth, the intervening glades covered with a rank growth of "blue joint," the low places of the usual swampy nature. The drainage of this region is to the Inlet; Anchor Point River being the largest stream, and this only a creek, leading down a forested depression.

North of Caribou Mountain this high ground breaks down to an elevation of 200 to 300 feet sloping to Sheep Creek, rising to 800 feet on the divide between Sharp Creek and Kussilof Lake, soon reaching the foot of the mountains and snow line from there. The ridge land breaks steeply around Kussilof Lake near its head at the foot of the range, a broad, rising plateau ridge, separating the lake from the Kenai River Valley. A low swampy area, with numerous lakes and ponds, occupies the region from the Kenai



Valley to Turnagain Arm, drained by the Chikaleen River and locally known as the Chikaleen Flats, a noted moose range.

This entire plateau, high and low, is an area of good, loamy soil, deep enough to be of value as agricultural land. Most of the lower, dry portions along the edges of the actual stream valleys, is well drained, easily cleared, fertile, and will no doubt be a farming and grazing region of some importance in the distant future.

### Forests

The Kenai Peninsula, possessed of such an interestingly diversified topography, of such climatic differences, and of such a variety of latent resources, has a no less heterogeneous forest growth, which combines every class of Alaskan forest, with the exception of only four conifers, namely, the fir, Abies amabilis (?), the red cedar, Thuja plicata, the black pine, Pinus contorta, and the yellow cedar, Chamaecyparis nootkatensis, the latter found in Prince William Sound.

Fringing the steep, rocky shores of the many embayments of Prince William Sound and the open ocean coast, is a type of generally poor forest, in many places withered and blasted by the sweep of winds from the nearby glaciers, struggling to attain the size and dignity of trees adapted to the uses of mankind, but succeeding only in the sheltered depressions and ravines, and around the coves, where a somewhat greater accumulation of organic

soil has fostered their growth, a small part of what is at most a very restricted area for so great an extent of territory. Along the shores of Port Wells and its system of deep fiords, there is no commercial timber at all. The forests are made up of Sitka spruce, Picea sitchensis, coast hemlock, Tsuga heterophylla, and alder\*, Tsuga mertensiana, the latter the dominant tree. Viewed from a distance these slopes present a dense, well-forested appearance, but when examined the trees prove to be stunted and depressed, offering no inducements to lumbermen. Occasional areas of from 50 to 100 acres of a better class are found, with 30 to 40 per cent of the growth spruce, some of these trees 36 inches in diameter and 120 to 130 feet high, but the usual run of the best spruce is from 16 to 24 inches, with 2 to 4 logs in a tree, few with even one log clear. These better areas are so scattered that, classed as a whole, the forest is little better than a good woodland type, in its yield of saw timber, but with a quality suitable for ties, short piling, etc.

The timber line as affected by exposure varies from an elevation of 300 feet in the gulches back from the beach line to over 1,450 feet on the slopes facing the Sound waters, where exposed to the southerly winds.

To the westward of Port Nell Juan (locally known as Kings Bay) there is a gradual improvement in the forest character with a decrease in numbers, size, and quality of the coast hemlock, which ceases entirely at Port Bainbridge, none being found west

---

\* The Alut name of this tree used locally by whites.

of Cape Puget, where the spruce becomes the dominant tree along the lower levels, the alchek most numerous in the upper zone, but common on all exposed places near sea level.

Days Harbor is the first bay on the mainland coast which has any extent of commercial forest, some very good spruce suitable for lumber of any kind growing in the gulches and on the slopes along its shores.

As before stated, no examination was made of the coast from Resurrection Bay to Kachemak Bay, but it is known to be a rough, rugged shore with very little forest generally, but some good timber is reported around Port Dick, Port Chatham, and Port Graham--locally English Bay--though in the two latter places the Cook Inlet Coal Fields Company failed to find suitable piling for their dock at Homer.

On the shores of Resurrection Bay a good spruce forest is found with an area of over-ature, decaying spruce extending up the valley along the line of the railroad, the best of it in the vicinity of Bear Lake, where it is being rapidly cut out for railroad purposes. Following the line of the railroad from this valley, the forest maintains its coastal character, with the Sitka spruce dominant, to Kenai Lake, there gradually merging into the inland or plateau type, denoted by a change in species and a marked deterioration in size and quality of the conifers, the cottonwoods alone maintaining their usual standard of height and diameter. The dominant tree in this new type is the Picea canadensis, with a mixture of alchek, Tsuga mertensiana, cottonwood, Populus balsamifera, quaking aspen, Populus tremuloides, and



birches, Betula papyrifera and Betula occidentalis. The alchek is found on the slopes of the mountain valleys and in the vicinity of Turnagain Arm, there down to sea level. The cottonwood grows almost to timber line; some of the largest specimens seen were at an elevation of 1,200 feet. The aspen chooses the southern exposures; while the birches are found everywhere, some of the best groves seen where the timber meets the shrub alder on the west slope of the mountains. Another spruce, Picea mariana, was seen in the swamps of the plateau, especially on the Chicaloon Flats, a small scrubby tree, rarely attaining a diameter of 6 inches, a dwarf beside the stunted white spruce.

The peninsula forests attain their greatest elevation on the slopes of the mountain valleys, in a few instances creeping up the shoulder of some mountain unswept by snow-slides, to an altitude of 2,500 feet, the general timber line being from 1,200 to 1,600 feet, but in many places as low as 600. In the white spruce zone a very small portion of the trees are large enough to make 12-inch lumber. The average breasthigh diameter of the best of it is below this, and when the entire area with its quantity of small dwarfed and stunted trees is taken into consideration the amount of 10-inch lumber is small. The miners of the Sunrise District during the past eight years have exploited almost the entire forest area of the Six-Mile and Canyon Creek valleys to obtain lumber for sluice boxes, so infrequent are trees of a suitable diameter.

The entire plateau region has no forest of a really commercial type, but it has not been classed as woodland because of the existence in restricted areas of trees suitable for building material for local use, and they might also be of value in the future for stulls, lagging, trestle timbers, and other mining purposes. Birches form a large part of this plateau forest, but are small in size, rarely over 10 inches, the largest seen being 21 inches, and averaging less than 5 inches. The large ones are, as a rule, decayed in the heart, as the sap being practically the only sound wood in the tree and are at present of no use except for wood. On the south slope of Kussilef Lake two willows, Salix alaxensis (?), were seen, one 17 and one 21 inches in diameter, both short-bodied, branching a few feet above the ground, and badly decayed, a very unusual size.

Along both shores of Coal Bay and on the elevated plateau between it and Cook Inlet the forest condition is poor. While there is a fair stand of trees for the region they are practically gone. Along the bay shore 40 to 50 per cent of the older standing trees are dead, and on the high plateau 80 to 100 per cent are dead but still standing, having evidently all died about the same time. They are being succeeded by a new growth seemingly not as thrifty as their predecessors; those of to-day are very limby, short-bodied, and have a rapid taper. This growth has not yet grown to lumber size, the largest being only 12 to 14 inches in diameter, and without care their future is destruction by fire.

The best stands of clean, thrifty birch were seen between the spruce and alder growth, at an elevation of 800 to 1,000 feet

on the divide between Sheep Creek and Kusailof Lake, the absence of fallen logs or forest litter being in pleasing contrast to the tangle of down trees in the spruce forest.

Observations in the plateau region lead to the conclusion that there is a gradual increase in the swamp area, which has been encroaching on the forest for ages, and there is every evidence, indicated by old logs and decayed stumps of large size, that a prehistoric forest of greater proportions once existed, probably destroyed by fire before the Russian occupancy of the region, each succeeding generation diminishing in size and quantity until they are reduced to their present impoverished state, when the new era in the country's history demands the best that is or was, to aid in the upbuilding of a new empire.

The entire forested area aggregates 1,784,203 acres, divided as follows:

	Acres
Timber forest	435,070
Birch	16,815
Woodland	920,114
Burned over	88,947
Mountain grass land	131,044
Marsh	24,701
Barran land	2,519,004

The following are the principal forested localities, with approximate areas and quantities:

Resurrection Bay region. Sitka spruce dominant tree; most of lumber trees old and overmature, affected in the heart; best lumber area on peninsula.

	Acres	Board feet
Spruce, 5 M per acre	60,570	302,850,000
Alchek, 800 feet per acre		48,456,000

Days Harbor. Timber same character as Resurrection Bay; harbor open; little chance for rafting timber; land nearly all steep; 12 to 15 million accessible.

Spruce and alchek, 5 M per acre	8,643	43,215,000
---------------------------------	-------	------------

Cape Puget to Days Harbor.

Spruce dominant; not accessible; steep cliffs; heavy surf.

Spruce, some alchek, 3 M per acre	10,867	32,601,000
-----------------------------------	--------	------------

Shores of Prince William Sound.

Steep ground; alchek dominant; some hemlock and spruce; 1,750 feet per acre.

	80,179	140,313,000
--	--------	-------------

	Acres	Board feet
Kenai Lake region. Everything over 8 inches counted, in white spruce; dominant tree; 2 M per acre	46,636	93,312,000
Turnagain Arm region. Mixed spruce and alchek; 2 M per acre	8,736	17,472,000
Resurrection Creek. Timber poor.		
Spruce and alchek	24,768	24,768,000
Six-Mile River and Canton Creek. Nearly all spruce. 1 M per acre.	22,464	22,464,000
Quartz Creek. All spruce; poor green timber on sides. 1 M per acre.	6,912	6,912,000
Kenai River and tributaries. Spruce and cottonwood on low land; few alchek on high ground. 1 M per acre.	52,998	52,998,000
Indian River. All spruce; few good trees. 1-1/2 M per acre.	8,880	4,320,000
Southside Kusilof Lake. Spruce; timber small; birch plentiful. 1 M per acre.	43,200	43,200,000

	Acres	Board feet
Coal Bay. East side; spruce; rough ground; 30 to 40 per cent dead. 1 M per acre.	17,750	17,750,000
Anchor Point River. Spruce; fair for region. 1-1/2 M per acre	<u>20,384</u>	<u>30,576,000</u>
Total	481,088	909,270,000
Birch forest 3 to 5 cords per acre.	16,815	67,260,000
Woodland. Mixed birch, aspen, and spruce forest suitable for wood and small mining timbers 750 feet per acre.	920,114	690,086,000

#### Merchantable Timber

The term, merchantable timber, susceptible of so many different applications, is here used to designate forest areas producing timber suitable for any purpose other than wood, such as the needs of an isolated mining region would demand in the absence of a better quality.

For saw timber, spruce is the tree usually sought, and the standard type of tree desired is far superior to the forest average, resulting in the waste of inferior stuff, in an effort to obtain the quality wanted.



On the shores of Prince William Sound there is no quantity of good timber, but small isolated tracts of fair hemlock are found, though too infrequent to be logged as such alone. Westward of the Sound waters, the spruce is of better quality, and there are limited areas such as found in Puget Harbor and Days Harbor, with stands upward of 20 M per acre, but the open waters and attendant surf almost prohibits its utilization, and the forest growing on the steep, surf-bound cliffs between these bays is not available at all. Resurrection Bay is sheltered, and in summer its timber can be obtained, though its steep sides make logging difficult. West of here, timber is not considered of a quality or in sufficient quantity to be used, until Port Dick is reached, and if the mineral prospects develop, the available supply will probably be utilized on the ground.

The spruce forest body in the valley at the head of Resurrection Bay is the best of the entire peninsula, selected tracts cutting 25 to 35 M per acre suitable for heavy railroad timbers. While the per cent of clearstuff is small, the timber is of a fair average quality. The stand is reduced by defect and poor tracts of second growth to about 5 M per acre as an average.

After crossing the divide and entering the white spruce (Picea canadensis) region, the timber is of value for local use only, there being a very small per cent of the stand large enough to make 12-inch lumber, and the railroad contractors are exploiting the entire Kenai Lake region to obtain ties for the line from the lake to the Arm. The value of the timber in this region is due to the need of it for future mining operations, for which

much can be used that is not of value for any other purpose.

### Undergrowth

The undergrowth of the region is of no importance as a protection to the soil, and has no economic value in its relation to the resources of the region or to the forest growth. The tree willows, shrub alders, etc., have a future value as wood, and are now used to some extent.

Following is a list of the shrubs and undergrowth of the region in the order of their importance:

Shrub alder	<u>Alnus sinuata</u>
Tree alder	<u>Alnus (?)</u>
Tree willow	<u>Salix alexensis</u>
Tree willow	<u>Salix sitchensis (?)</u>
Shrub willow	<u>Salix barclayi</u>
Devil's club	<u>Echinopanax benidum</u>
Red alder	<u>Sambucus pubens</u>
Highbush cranberry	<u>Viburnum pauciflorum</u>
Salmonberry	<u>Rubus spectabilis</u>
Huckleberry	<u>Vaccinium alexensis</u>
Blueberry	<u>Vaccinium uliginosum</u>
Mountain ash	<u>Sorbus umbellifolia</u>
Ground juniper	<u>Juniperis communis</u>

In addition to these are many annual and perennial plants which, with the great quantities of grass--a kind of "blue joint" resembling a coarse red top,--grow very rank in the mountains



and plateau region, particularly so on the high plateau west of Coal Bay. This grass, like the hemlock seedlings of the coast side, quickly succeeds any disturbance of existing conditions, growing especially rank and thick--often over 6 feet in height--in burned areas, like broken ferns of the Pacific Coast, starting in new burns almost before the ashes are cold. When green in summer it makes an excellent feed for any kind of stock, but in the spring and early summer before the new green grass gets well started, is the cause and origin of many forest fires.

### Reproduction

In the coast forests the young hemlock and spruce quickly restock any disturbed forest conditions, and will always maintain themselves to a certain degree of usefulness, but the new growth is not as clean of limbs or so tall as the older one, where seen, usually in the vicinity of an old Indian village where conditions were not the best.

In the mountain sections, where fire is each year encroaching on the forest area, the reproduction of the conifers is almost hopeless. Between Kenai Lake and Sunvise, the forests are largely burned, and not over 50 spruce seedlings were seen along 40 miles of trail. Along the Kenai River, in the plateau region, where there is a good soil, a few spruce saplings were seen in a burn 14 years old, mixed with a growth of quaking aspen, birch, and willow, but the first growth as a general thing is of the broad-leaved variety, and when this has almost attained its growth,

then begins the restocking of the spruce, the young trees protected by the short-lived deciduous trees until able to take care of themselves. The forest all indicates that this system has gone on for many years, at least since the Russian occupancy, there being many evidences of their old cuttings restocked in this way.

All the conifers of this region are prolific seeders, many small trees bearing cones which all seem to be productive, and there are usually sufficient seed trees in the burned areas to readily restock them, and, in the plateau region particularly, there is a good soil which should readily promote a forest growth, but for some reason they do not get a start and grow slowly when they do. On the whole the reproducing powers of this forest are not very encouraging, emphasizing the need of care for the existing trees.

### Fires

Fire is a serious menace to the forests of the mountain and plateau regions. The fire season begins about May 15 and lasts until August. The first month of this period is the most dangerous, when, as a rule, the skies are clear, with prevailing westerly winds which dry the dead grasses and plants until they are like tinder, and catch fire at the least opportunity, the fire spreading rapidly, killing everything in its way. Between Coal Bay and the Inlet where the grass grows luxuriantly and there are many down trees, fire is particularly dangerous.

In the Hope and Sunrise districts fires have killed most of the much-needed timber. In 1896, the year of the rush

to these "diggings," fire swept up Canyon Creek, burning nearly every cabin of the stream and destroying most of the timber. The season was very dry, and the hundreds of men working along the creek, putting in wing dams and doing other work, had accumulated much litter and dead tops, which, when set on fire, through carelessness, resulted disastrously to these forests, and they show no signs of recovering. In the early days, it was thought, and undoubtedly is in part a fact, that forest fires destroyed the mosquitoes which were such an annoyance, and they were set for this purpose, with the result that much of the timber is gone and the mosquitoes mostly there yet.

Fires were sometimes set to clear the rank growth of grass from the mining ditches when being repaired in the spring. These causes, with the usual amount of carelessness, see each year a new area of burn added to the already proportionally large one.

Much of the plateau region is burned, especially along the Kenai River on both sides.

The extension of the railroad into this fire area, with its accumulation of tops and forest debris along the line, adds a new menace to the living forest, especially with wood-burning engines such as are used now.

The attention of the management of the railroad was called to this fact, and they contemplate the use of spark arresters, which will be a precaution, if not a safeguard.

## Resources and Industries

Like most of Alaska the fisheries and mineral wealth are the present and prospective resources.

Two salmon canneries were in operation on the Cook Inlet shore, but one, located on the Kenai River one mile above its mouth, was burned last spring. The other is located on the mouth of the Kussilof River, owned by the Alaska Packers' Association, having a capacity of 30,000 cases per season. The fish were taken from the Kenai and Kussilof rivers, both prolific salmon streams. Little use is made of the forests by this enterprise, as all of their building and box material, is shipped from San Francisco, Calif. The only native timber used is firewood and trap poles and stakes, several hundred of the latter being cut each season.

The immense coal deposits of the Coal Bay region are practically undeveloped; the quality of the coal offering little inducement to go on with work now started. The most extensive development work was done on the west end of the Homer Spit. This work was begun in 1894 by the Alaska Coal Company of San Francisco, taken over in 1899 by the Cook Inlet Coal Fields Company of Philadelphia, Pa., and the existing improvements made by them. A dock was built at deep water on the end of the spit, and 7 miles of railroad connect with the mines. The first loads of coal brought to the dock in 1900 are still in the cars, where left on the track at that time. Mr. S. F. Pemberthy, the resident manager, was hopeful of a renewal of the work, but this is doubtful, as there is no local market and the quality--a light lignite--does not warrant shipment.

Coal is also found along the west shore of the bay, and was seen on both sides of Sheep Creek some distance up the valley. It is being exploited near Port Graham, but no extensive work has been done.

Mr. Pemberthy found the timber in the vicinity of Homer too small for cutting into mining timbers suitable for their purpose; the only use it could be put to was for stulls and logging.

In 1902 the Aurora Gold Mining Company of New York City put up buildings and shipped machinery to Aurora, on the east side of Coal Bay, for the development of a gold-bearing quartz vein, but it was reported valueless by the engineer who experted the property, and the machinery is still on the dock.

Quartz of good assay value has been found around Port Dick, and the discoverers expect to develop a paying mine next season.

Placer gold is found nearly everywhere on the peninsula; abandoned workings and unused hydraulic outfits--the derelicts which mark the scene of wrecked hopes--are frequently found. The only paying placer is in the vicinity of Hope and Sunrise, where gold was first discovered in 1891. A good strike in 1895 caused the stampede to that section in 1896, and active mining has been carried on since. The camp has never been considered rich, the individual miner realizing little more than a "grub-stake" from year to year, but recent hydraulic workings have produced more gold, the shipments in 1904 being double those of



any previous season, promising much better things for the future. Considerable money is being spent for dredgers and hydraulic machinery, the former to work the deep gravel of the stream beds, the latter to develop the benchdiggings which heretofore have been worked but slightly.

Copper ore is being developed on Lynx Creek with uncertain results, and prospects are being developed slowly all over the peninsula, but so far no quartz mine is on a paying basis.

Up to this time work has gone on in a slow way, the peninsula attracting little attention except as a game region, being considered out of the world and difficult of access. The most important event in its history was the beginning of construction work on the Alaska Central Railway to run from Seward on Resurrection Bay to some point on the Yukon River.

For some time the future of this enterprise was in doubt, but so far as can be ascertained from those interested the building of the road is an assured fact, and every effort will be made to extend the line at least 100 miles next season. The exact route is not yet determined, surveying parties being in the field at the present time, selecting the most feasible route to and beyond Turnagain Arm, where some engineering difficulties will have to be overcome. The proposed route will lead up the Katanuska Valley, tapping the valuable deposits of hard, bituminous coal known to exist there, and then is to be extended to the Tanana, where the recent placer discoveries are attracting hundreds of miners.

The construction of this railroad is drawing heavily on the timber resources of the land contiguous to its line, saw timber being taken from homesteads, placer claims, and all private holdings, without consent of the claimants and in spite of their protests. It is the company's intention to cut timber at the present mill site to be transported 50 miles, before the mill will be moved. If it is found necessary to build snow sheds on Turnagain Arm, the demand for timber for this work will affect the supply available for the miners on the adjacent creeks.

The establishment of this all-American railroad to the interior of Alaska through the most resourceful of all of its territory will undoubtedly be the cause of a considerable influx of people, who will develop the latent wealth of the country in what is now a veritable wilderness just awakening to a realization of its possibilities.

### Lumbering

Until the past year very little lumbering has been done on the peninsula, and this was in connection with some mining enterprise. Previous to this time the miners and others using lumber whipsawed what they needed. The miners cut their supply in the idle season, costing about \$50 per M delivered. Whipsawyers were paid \$4 per day each, two men cutting from 200 to 300 feet per day. In the Turnagain Arm region, trees suitable for 10 and 12 tapered sluice bottoms were not readily found, few trees cutting more than 2 logs, and many only one suitable for this purpose.

The Coast Range Mining Company of Hope, working on a quartz prospect, operating in connection with the Palmer Creek Mining Company, and the Bear Creek Mining Company, working placer ground in that vicinity, have a steam mill with a cutting capacity of 10 M per day, but owing to the small size of the timber, the output averaged from 6 to 8 M per day for the first season, when 300 M was cut in a 6-weeks run, beginning in July, 1904. Of the amount Mr. Buzard, the acting superintendent of the property, stated that a very little over 4 M, or only 13-1/3 per cent, made 12-inch lumber; the most of it cut into 1-1/2 x 8, 12 feet long. Anything that would work into a 2 x 6 was cut, and by using a gang edger everything possible was gotten out of the logs 12 feet long, running 10 to 12 per M. The trees yielding two and sometimes three logs, often only one. Alchek is largely cut, and Mr. Buzard thinks that for mining purposes it is superior to the spruce, being clearer and stronger.

The mill wages are the same as paid to miners, \$3 per day and board. The logging done by this company last winter was the first winter wage working every done in the camp. The loggers were paid \$1.85 per day, working time, horses being used to haul the logs. Mr. Buzard had no estimate of the cost of the logs at the mill. The timber was cut on their Bear Creek placer ground, yielding from 2 to 3 M per acre of spruce and 1 to 2 M of alchek in the best bodies of it.

Mr. C. F. Carter, superintendent of the Rainbow Creek Mining Company, who is also superintendent of the construction of a \$75,000



dredging plant to be operated on Palmer Creek, stated that his company was putting in a small steam mill on Rainbow Creek on the north side of the Arm, opposite Hope, to cut lumber for their hydraulic plant on that stream.

The mill has cutting capacity of 20 M per day, lumber to be cut off the company's placer holdings for their own use.

A so-called sawmill was reported on Bertha Creek. It is a whipsaw run by water power, with a capacity of 400 feet per day, the owner having a contract to furnish H. P. White, a mine operator in that vicinity, with 14 M of flume material for season of 1905.

The Cook Inlet Coal Fields Company of Homer put up a small mill with a capacity of 3 to 4 M per day, and cut about 20 M, then shut down, the product being too small for mining purposes and costing more than Puget Sound lumber delivered on their dock. The excessive cost was due to the expense of getting out sound logs of a size suitable for their purpose. Mr. Pemberthy stated that if operations were resumed all their lumber and piling would be imported from Seattle, as the material obtained locally costs too much and is not up to the standard required for such work except for stulls and lagging.

A small mill was put up on Kenai Lake in 1900, but the Kenai Lake Mining Company who built it quit work soon after it started, and nothing was ever done with it. A small mill was put up on Indian River near the head of Kussilof Lake last year to cut mining material, but it never cut anything to speak of.

The most extensive lumber cutting on the peninsula is being done by the Alaska Central Railway Company's mill, now located in the Bear Lake Valley about 6 miles from Seward.

This mill was first erected on the Seward Townsite, and started running September 15, 1903, cutting 4 to 5 M per day, until March 1904, when the cut was increased to 7 M per day, sawing railroad timbers with some commercial lumber worked off of the logs in slabbing them to a requisite size for railroad purposes. In July of this year the mill was moved to its present location and the lumber cutting stopped, the demand for trestle timbers crowding the mill to its greatest capacity. The cut now averages about 13 M per day, a shameful amount of waste being slabbed off of the logs to be burned.

Logging is done by contract at \$4 per M, Scribner Scale, the railway company furnishing the engine and cable. Logging was being done about 1-1/2 miles from the mill, hauling the logs by train, but the new setting is near the mill, and the cutting about half a mile distant. The present contractor, Mr. J. D. Johnston, is working a crew of 13 men at an average wage of \$3.50 per day, putting in about 13 M per day. The ground is even, with a good down grade, 12 inches of dry snow making ideal logging conditions. The uneven growth of the timber necessitates frequent moves, from 200 to 800 M being obtained at a setting. The best timber yields 25 to 30 trees per acre suitable for their purpose, averaging about 1,000 feet per tree, cutting from two to five 16-foot logs.

The settlers along the railroad have strongly protested against the company taking timber from their homesteads, but to no avail, and the U. S. Commissioner at Seward advised them that they had no regress in the matter. Mr. A. W. Swanitz, Chief Engineer and Manager of the Alaska Central Railway, stated that they were advised by the Registrar of the U. S. Land Office at Juneau that they were privileged to cut on any locations made subsequent to the preliminary location of the railroad line. So far the company have cut between 4,000 and 4,500 M. Of this amount about 100 M was sold to the commissary people and others connected with the railroad. In the first 14 miles of line, 9,200 lineal feet of trestle was put in. The bents are made of round, and the mudsills of heavy timbers.

Mr. Swanitz stated that timber for the first 30 miles of track would be cut at the present mill site, as there was no saw timber in that distance. The next mill site is to be located on the north side of Turnagain Arm, where good timber is again found, then moving to the Matanuska Valley.

A wood-burning locomotive is used which consumes 2-1/2 cords of wood per day, and the electric plant uses 4-1/2 cords, costing \$3 per cord, some being cut by settlers. Mr. Swanitz stated that the average cost of ties was 34 cents, while Mr. F. Young, who is tie inspector, stated that 16 cents was paid for ties piled in the woods, and 20 cents when piled along grade.

The contracts are let to persons cutting on land recorded as homesteads 3-1/2 miles from Seward, the ties for use on terminal grounds near town and anywhere needed.

The Yakutat Lumber Company are shipping lumber from their mills at Yakutat for this market, as well as from their mills at Ballard, Washington.

The following are the prices of lumber per M feet at Seward in October, 1904:

Puget Sound fir, rough	\$25.00
sized	28.00
rustic	35.00
Flooring	35.00
dressed	35.00
Yakutat spruce, all kinds	25.00
shingles	3.50 per M

Lumber prices at Sunrise and Hope, October, 1904:

Puget Sound fir, rough, any kind	\$30 to \$40
flooring, etc.	40 to 47.50
Freight on lumber Seattle to Hope	21.00
Spruce wood per cord at Seward	4.50
"    "    "    "    " Sunrise	3.00

### Settlements

The region is sparsely settled, with few people living outside of the villages.

Seldovia has 15 whites and about 75 or 80 natives. The whites are traders and prospectors, the natives live by hunting and fishing.

Anchor Point has 8 or 10 whites, beach miners, and traders, and a few natives.

Ninilchek was a one-time Russian penal colony; it has about 60 natives.

Kenai is a slightly village of about 200 inhabitants, Russian and native, with a few white men. Hunting and fishing occupations are followed. Natives make a good living.

Hope is a mining town with a winter population of about 100; 200 men on creeks in mining season.

Sunrise is a mining town, winter population 125; 200 or more on creeks in vicinity during mining season.

Along the Kenai River perhaps half a dozen men winter, hunting and trapping, and as many more on Coal Bay and Sheep Creek.

Seward has a resident population of 200. There are several stores and saloons, a hotel, etc., supported by the railroad entirely. The company contemplates the extension of their dock privileges and the construction of machine shops, etc., early next season, which will increase the population materially.

#### Alienated Lands

The practice--under the fee system--of accepting for record in the recording offices notices of location of both mineral and homestead entries so imperfect in description as to leave it to the imagination of the reader to determine their situation and in some instances the area, makes it extremely difficult to definitely determine the location or amount of alienated lands, and the following are given as best ascertainable from the records:

	Acres
Scrip on Bear Cove, Coal Bay	160
Scrip on Seward Townsite	160
U. S. Agricultural Experiment Station, Kenai	320
Russian Church site, Kenai	20
Russian Church site, Seldovia	..
Cannery site, Kussilof	20
Cannery site, Kenai	..
Store site, Kenai	.7-1/50
32 homestead entries, Kenai	9,694
32 Coal-land entries, Kenai	7,560
340 gold-placer entries	6,800
80 quartz entries	1,650
240 placer-oil entries	31,195
Total	57,769.7

The oil-placer locations were for the most part made in 1903, and they will revert to the Government unless the usual course of relocating them on January 1, 1908, is pursued, as no assessment work has been done. These locations are made in groups of twelve to twenty 160-acre tracts, by the same individuals, resorting to a rearrangement of the names on each new tract.

The largest block of land acquired under the rights of placer-oil locations is by the Alaska Colonization and Development Company, an organization incorporated under the laws of Arizona, the head office, 24 State Street, New York City, ostensibly



for the purpose of establishing a Finnish colony on and about the shores of Coal Bay for the purpose of developing the fisheries, coal, mineral, agricultural, and grazing resources. Mr. E. S. Churchill is the general manager, visiting the company's headquarters at Port Axel--Bear Cove--each summer. Mr. J. A. Carlson is in charge of the property, living on the ground the year round. Soldiers Additional Homestead Scrip was used to obtain title to four parcels of land aggregating 150 acres on Bear Cove, which is subdivided into town lots, a rough, uneven tract useless for any purpose. Mr. Churchill has a homestead of 217.2 acres located which he visits yearly, and the company has seven 160-acre tracts of gold placer surveyed and recorded where there is no gravel, and on the opposite side of Coal Bay, along Fox River and up Sheep Creek, they have surveyed 74 claims, 46 of which are on record. Some development work has been done on some coal lands near Fox River, and 8 miles of wagon road have been cut up Sheep Creek for assessment work on the oil land. On paper they have a proposed railroad from Bear Cove to Fox River; the evident purpose is stock jobbing and would bear investigation.

The other extensive placer-oil locations are made by different parties claiming six to twenty 160-acre tracts, using eight or ten names, the locations made by one or two persons as agents for the others. These oil claims cover much of the forest land of the vicinity, and are located for speculative purposes only, there being no oil rigs or development work of any kind.

In the vicinity of Turnagain Arm, placer claims are located to secure possession of timber, which is both scarce and valuable. The larger concerns do this to prevent individuals obtaining the timber, who would hold it for a consideration.

Most of the homesteads have been located in the vicinity of Resurrection Bay since the railroad work started, and it is quite probable some at least are made to obtain the timber, though a few expect to try the development of agriculture and dairying in expectation of the growth of Seward as a railway terminus.

On most of these homesteads the soil is shallow, overlying glacial gravel, and the land is of more value for its forest than it will be for agricultural purposes. The locations made in other sections of the peninsula are evidently made in good faith, there being no speculative incentive, and a lack of timber on them.

This location of homesteads in the best timbered areas along the line of the railroad will continue to the detriment of the forests of the region, and be of little use to the individuals for the present at least.

#### Climate

The following temperature and precipitation records taken at Orca and the experimental station at Kenai from the Weather Bureau reports are the only data available for the region.

Orca is probably colder than Seward, with an equal amount of precipitation, and is a fair average of the coast of Prince William Sound. Kenai is drier and colder than Seldovia, warmer



than Hope and Sunrise, with an equal amount of precipitation.

The rain-laden winds are from the south to southeast, at times furious gales along the coast. Southwest to northwest winds on the Inlet side are dry and frequently cold. The prevailing winter winds are from the north, blowing very cold when sweeping across the glaciated mountains.

Very little snow falls in the vicinity of Seldovia, and the thermometer rarely reaches zero. Seward is apt to have 4 to 6 feet of snow, 8 or 10 degrees below zero a minimum, with frequent rains on the coast all winter. Sunrise and Hope have 12 inches of snow on an average; 45 to 50 below zero is not uncommon in winter. Kenai Lake and river valleys have 18 to 30 inches of snow, the temperature down to 40 below.

## Agriculture

Representing as it does one of the earliest settled portions of Alaska and possessing, on its Cook Inlet side particularly, a climate which compares favorably with that of northern New England, it seems remarkable if the region was adapted to agricultural pursuits that this industry should not have been developed to some extent at least. The early Russian settlers made attempts at gardening, and the natives have followed this practice for many years, cultivating small gardens but not producing sufficient to maintain themselves.

Garden crops of the hardier sorts do well; the potatoes grown here are watery, and have a "sweetish" taste similar to that of a frozen one; grains will not mature, but produce an excellent straw for hay, which it is difficult to cure because of the cloudy, rainy weather which prevails during the haying season. The entire region is subject to early and late frosts, which are detrimental to vegetable growth, and even in the sheltered mountain valleys the nights are cool.

The cost of clearing and breaking farm land on the experimental station farm at Kenai was \$60 per acre, where there was a second-growth forest with few trees of any size. In the vicinity of Skelahn Lake and along the banks of the Kenai River for some distance below the lake, there is a burned-over area of apparently good soil which lies fairly level, offering the best opportunity for agriculture of any place on the peninsula, but its isolation will prohibit its occupancy for many years to come.

With due deference to the opinion of those who are enthusiastic over the agricultural possibilities of this region, the writer fails to see where the opportunity offers. There are many men living in Alaska who make it their home from year to year, who are acquainted with its resources, who believe in its future and are willing to engage in any enterprise, especially farming, if it promised to be even moderately lucrative, but the fact remains that none are attempting it as a business, and few as an experiment. A farmer can not live without a market, and until the mineral wealth of the country is developed sufficiently to create one, few will attempt to eke out an existence wrought from the soil amid these ice-laden hills, whose chill is fatal to their enterprise.

#### Grazing

The grazing resource of the region, like its agricultural, is not sufficiently developed to demonstrate its possibilities.

A few cattle are kept on the experimental farm at Kenai which are fed about five months of the year, and a few are owned by the natives there, which get very fat in the summer season and seem to do fairly well without much feed in the winter, but spring finds them very poor. Horses and cattle both nearly maintain themselves on the Homer Spit, supported by a nutritious salt grass, growing on the open spit where the snow is swept clean nearly all winter and the grass starts early in the spring. These animals rarely go into the hills to feed, even when the early

grass is at its best. Insects are very troublesome in the summer, but stock which becomes acclimated seems to thrive in spite of them.

Like farming, this industry is entirely in the future, awaiting a market to develop it.

#### Game

The Kenai Peninsula has the distinction of being the home of the largest moose, and has some of the largest and fiercest bears known to the world; and the rock-ribbed, ice-bound fastnesses of its mountains are the home of the mountain sheep, whose pursuit amid the crags, declivities, and emerald vales in the high elevations of scenic mountains is the most fascinating of hunting sports. A very few caribou are known to still exist in the vicinity of Caribou Mountain, at one time the home of immense bands, now nearly extinct. Brown and black bears frequent the stream valleys; porcupines and rabbits are numerous; the spruce grouse is very common; ptarmigan abound above timber line, and waterfowl are very plentiful in the Chicalson Flats region. Fur-bearing animals are quite plentiful, and are a considerable source of revenue to the natives.

The general range of the moose is coincident with that of the white spruce (P. canadensis), but a few have strayed across the low pass and been killed near Resurrection Bay. They are most numerous in the region between Coal Bay and the Inlet, where the range conditions are almost ideal, made up of ample forest and brush cover, with sufficient ponds and open ground above

timber line to afford an opportunity for escaping insect pests in the summer. This territory also includes the range of the remaining half dozen caribou. The Chikaleon Flats is another favorite moose range, not much hunted.

The best sheep ranges are on the west slopes of Sheep Creek, no one knowing how far they penetrate the range, but probably no great distance. About the glacier at the head of Skalahk Lake is another favorite haunt, and some think the largest band range the mountains on the east side of Kenai Lake between Vickery Creek and Snow River. They formerly kept to the lake slopes, but the continued blasting on the railroad and the increased number of hunters have driven them back to the head of Snow River. Most of the sheep on the peninsula are in these three localities.

Outside of the mining districts, the fur and game have been a source of livelihood for all the natives and many of the whites of the Cook Inlet region. The issuance of permits for the killing of game by trophy hunters was the means of bringing a number of people to the peninsula each year, who employed guides and packers and spent a liberal amount of money in any community they were in. Mr. Geo. S. Mearns, the storekeeper at Kenai, estimated that stopping the issue of permits meant a loss of \$4,000 to the natives of that place, and the Seldovia natives also felt the loss of this trade, and incidentally the traders did also.

There is no question of the abuse of permits, as many hunters allow too short a time to obtain their trophies, and kill all good specimens, taking away the best. As a remedy for this evil Mr. Mearns suggested that trustworthy guides be licensed,

and Mr. Pemberthy, of Homer, has proposed that permits be recorded and a certified copy be posted at the point of arrival and departure of the hunter, and a copy also be posted in the party's main camp. The citizens are jealous of the permit system, and would readily report any abuse of permits if they knew the privileges granted.

Few, if any, of the white men of the region wantonly slaughter game, and little, if any, that they kill goes to waste.

The Indians, to whom the game means so much, are the only wanton destroyers, and so strong is the inherent blood lust within them that they are unable to resist the temptation to kill when chance affords. Another evil is the practice of traders grub-staking natives to hunt heads, one case coming to notice where three large heads were said to have been gotten in this way this season.

The natives aver that twenty years ago there were no moose on the peninsula at all, and that they were most numerous about seven years ago, when the large influx of white men took place. There is a variance of opinion as to the number found now. Some who have lived here since 1897 think there are more, others say less, but they are still fairly numerous, and a consensus of opinion seems to be that they are maintaining themselves, but care should be taken to prevent their destruction by strict enforcement of the game laws, and if necessary the placing of a bounty on wolves, which all old timers concede kept them down in the early days.



### Sentiment

The "old-timers" fear a curtailment of time-honored frontier privileges by the creation of a forest reserve, but realize the necessity of timber preservation and the prevention of fires as it affects their future welfare. Part of the element which has followed the railroad are mostly transients, who are indifferent to anything affecting the general welfare of the country; others are looking to the immediate present and the spoliation of anything that offers immediate recompense, and condemn any movement which would hinder their purpose, without a thought of the future. A few realize the intent and purpose of the movement, and heartily support it, but the majority are entirely indifferent.

### Conclusions and Recommendations

In a region so remote from the centers of civilization, its resources undeveloped, its inhabitants scattered throughout an almost untrammelled wilderness, wrestling with untoward circumstances, in an effort to reduce to the needs of mankind a land which offers so little and demands so much, the question of creating a forest reserve does not present the arguments usually brought up where the preservation of watersheds and the conservation of the water supply is so vital to the interests of all the people, and it seems a far-fetched idea to seriously contemplate forest preservation where there is so little apparent need of it and so little to preserve.

Here the living forest, though small in size, is the product of many years growth, which when destroyed does not seem to thrive under the civilizing hand of mankind, and so slow is this growth that the seedlings of to-day will be of little use at the end of this century. There is relatively small area of timber forest, every foot of which will sometime be needed. The forest cover in its primal state is also very essential to the prolonged existence of the living game, which represents the best types of its kind and, if cared for, will be a source of revenue to the inhabitants and pleasure to the world for many years to come.

There is a distant future before this region when the people will need every bit of forest product, and the preservation of the forest, for its forest worth, in behalf of those to come, is the most that can be said for it; and in consideration of this and the other circumstances mentioned I have the honor to recommend the creation of the Kenai Forest Reserve, to wit: Beginning at the most westerly point on the shore line of Portage Bay; thence along the southerly shore line of said bay to the shore line of Prince William Sound; thence following the general mainland shore line of said sound, in a southerly direction, to Cape Puget; thence continuing in a general southwesterly direction, along the general mainland shore line of the Pacific Ocean, to the most southerly point of the mainland shore line; thence westerly to midchannel in Cook Inlet; thence northerly up midchannel in said inlet to a point opposite the midchannel line of Turnagain Arm; thence easterly up this midchannel line to the most easterly point on the short line of said arm; thence easterly across the "Portage" to the most westerly point on the

shore line of Portage Bay, the place of beginning. And it is further recommended that laws be enacted for preventing the alienation of large tracts of the public timber lands, under the guise of the placer laws, by power of attorney. And it is further recommended that certain portions of the area included in the bounds of the recommended Kenai Forest Reserve be made game preserves, for the perpetuation of the game species of the region, one to be located so as to include a favored habitat and breeding ground of the mountain sheep (Ovis dalli kenaiensis), another to include the year round haunts of the moose (Alces americanus gigas), and the range of the few remaining caribou (Rangifer granti). For the first I would respectfully suggest an area to include the headwaters of both branches of Sheep Creek, extending 10 miles in an easterly direction from timber line on the east side of the Sheep Creek Valley; for the second I would suggest an area 20 miles long by 13 miles wide, the center of its northern end about opposite the T spit, one mile south from the shore line of Kussilof Lake, to include the Caribou Mountains.

#### Administration

The few interests to be conserved in this comparatively large area do not demand the usual number of patrols in a reserve of this size. The fire control must be largely by the moral support of the residents, its necessity impressed by the presence of a few Rangers. Except in the mining region, which is largely burned, there is nowhere sufficient people to cope with a forest

fire once under way in the dry grass and moss.

There will be few timber sales at present, and these in the mining region of Turnagain Arm and in the vicinity of Seward.

For the present, the needed rangers, working under the direction of a general supervisor for Alaskan reserves, would be located as follows:

Ranger in charge located at Kenai Lake, covering region from Seward to Skalahk Lake, service the year round, travel on lake and rivers by canoe. Turnagain Arm watershed, headquarters at Sunrise, service 12 months, one ranger, travel on foot.

Game region of Kuasilef Lake from head of Sheep Creek to Skalahk Lake, headquarters at Kelly's sawmill, Kuasilef Lake, post office Kenai, service May 1 to August 15, one ranger, travel by canoe on lake, on foot across country.

Coal Bay region, head of bay to Anchor Point, headquarters at Homer, service from May 1 to August 15, one ranger, travel by dory on bay, on foot inland.

Saw timber of good quality should be charged for at the rate of \$1.50 per M Board feet.

Ties	\$402-1/2 each
Mining timbers	.60 per M bd. ft.
Piling	.01 per lineal foot
Green spruce wood	.25 per cord
Dry spruce wood	.12-1/2 per cord
Green birch or alder wood	.12-1/2 per cord

These prices are applicable where there are communities of size, with liberal construction of free-use privileges to individuals where isolated and attempting the development of the country.

1908

7

*Rejection*

Alexander Archipelago Forest Reserve.  
Olmsted. Sept. 1906.

Organization.

## INTRODUCTION.

This inspection of the Alexander Archipelago Forest Reserve was largely in the nature of an examination into forest conditions throughout all of south-east Alaska. There is a striking uniformity of both economic and timber conditions in the region as a whole. About one third of the total area is now within a reserve. The remainder is unreserved public timber land, administered in accordance with a policy absolutely at variance with that now applied by the Forest Service upon the reserve. Here are public lands of precisely the same nature, lying side by side, governed by two different policies with hardly a single point in common. It is clear that there is something wrong. Either the forest reserve is uncalled for, or the system of timber management on the unreserved lands is unwise. This is one of the most important subjects to be discussed, and enters into all of the various topics reported upon.

The complaints against the reserve and the general sentiment of the people toward it will be taken up first; then the administration under present regulations will be discussed in detail and recommendations made for improvement; lastly, the necessity for extending or reducing the present reserve area will be brought out



2.

as clearly as possible.

The cruise around the islands was made in company with Mr. Langille in the launch "walrus". A week after our return this launch was burned to the waters edge, causing the death of two Indian children who were bottled up in the forecastle. She was beached and is a total wreck.

The points visited included Kasan, Baldwin, Niblack, Dolomi, Gravina, Sunny Point, The Portage, Metlakatla, Klinkwan, Hunter Bay, Howkan, Grace Harbor, Coppermount, Sulzer, Bruce, Copper City, Sukkwan, Klawak, Shakan, Marble Creek, Kake, Woewoodski, Petersburg, Wrangell, Hadley, Mt. Andrew, Karta Bay and Kiem. Juneau, Douglass and Treadwell were reached by the regular steamers. At all these places a special point was made of seeing everyone in any way concerned with forest reserve matters and the whole question was very thoroughly discussed from all sides. As a rule the people gave their views quite freely in accordance with their understanding and experience.

#### THE RESERVE.

In order to clearly understand the complaints and general sentiment, and in fact in order to make this report intelligent as a whole, it seems quite necessary, before all, to explain just what this reserve is. Mr. Langilles various reports give a good idea of the conditions, but it might be well to bring out, if possible, the marked differences between this Alaska reserve and those in the

3.

States. The following description may help along.

Take the Sierra Reserve and place it directly on the coast, sinking it down until the highest peaks are from three to four thousand feet above sea level. Let the Pacific break through the main divide in three or four big straits making as many islands out of the principal range. To seaward, at distances of from ten to fifty miles, sprinkle in innumerable islands of all sizes and drop a few also to the eastward. In place of rivers, creeks and canyons let the reserve be cut into on all sides by countless deep water ways with soundings of from ten to one hundred fathoms, the shores rising abruptly. ~~Through~~ in many small streams with precipitous falls and cascades. Then strip off the whole surface down to bed-rock and boulders. In spots put on a thin layer of muddy soil and cover the whole with moss. Over all except the highest elevations plant a dense forest of spruce, hemlock and cedar, leaving some of the flat places as swamp or "muskeg" dotted with a scrubby growth of pine. Throughout this forest, cover the ground with an exceedingly dense and often almost impenetrable undergrowth of all kinds of brush (chiefly devil's club) and let the ground be as rough as possible. Spread patches of brush, grass and meadow on the higher tops and let the bare rock stick out occasionally. On this area of over 5,000,000 acres imagine a population of only 1,500 Indians and about 500 whites, industries represented by a dozen small copper mines, as many salmon canneries and half a dozen little saw-

4.

mills. Then consider that, practically speaking, there are no roads or trails and that travel by land is out of the question. Remember that communication is by water only and very uncertain at the best. Picture three or four work horses, a couple of cows and one mule in the whole region. To the climate of the Sierras add perpetual rain in the summer and rain and snow in the winter and the characteristics of the south-eastern Alaskan forest may be partly understood. To be thoroughly understood, they must be felt.

#### COMPLAINTS AND SENTIMENT.

It seems best to here give the gist of interviews with all representative men who have direct interests on the reserve. This will show the feeling in general and will also be valuable as a matter of record.

Mr. U. S. Rush, of Kasan Bay.

As Mr. Rush pleaded directly to the President for the abolishment of the reserve, as he feels very strongly in the matter and as his views are in many ways unique, his remarks will be discussed in detail at the end of this section.

Mr. J. R. Heckman. The leading merchant of Ketchikan and Manager of the Alaska Packers Association's Cannery at Loring (one of the largest in Alaska). Mr. Heckman stated that the reserve had not affected him one way or the other. Many misstatements had been made to him in reference to it. When informed of the objects and regulations he expressed himself to the effect that it was quite unobjectionable and probably a wise thing.

(The hatchery in connection with the cannery at Loring is the largest in the world: 70,000,000 fry are hatched out yearly)

Mr. H. Z. Burkhardt. Proprietor of the Ketchikan Sawmill and Ketchikan Power Co. Mr. Burkhardt operates one of the largest sawmills in Alaska and obtains part of his timber from the reserve. He said he would prefer to see all the country placed in a reserve and

5.

purchase his timber accordingly. He would then know just what he had to pay and under what conditions he could purchase, as opposed to settling up in a very uncertain way as an "innocent trespasser" for timber cut on unreserved lands(a matter discussed later on).

Mr. Geo. E. Green, Engineer in charge of the Wales Copper Co. at Hadley. Mr. Green objects to the reserve on general principles. He seems to have had no personal difficulties(except that he was about to locate some timberland by means of scrip just as the reserve was proclaimed) but believes the reserve works a hardship on prospectors and settlers. He was not very familiar with the law and regulations.

Mr. Geo. Irving, of Ketchikan.

Mr. Irving is Chairman of the Republican Committee of the Ketchikan district, owns and operates a small gold mine on Gravina Island and has recently been appointed Assistant U. S. District Attorney. He objects to the reserve on account of restrictions thrown in the way of miners and others who want to get timber. He does not object to government control of the timber nor does he object to paying for it, but he believes he ought to be allowed to take it whenever he needs it, without delay or restriction and without anybody's consent. He also objects to the Forest Service making reports on mining claims(a matter referred to below).

Mr. Robert Rae. Superintendent of the American Coral Marble Co. at Baldwin. Mr. Rae has no objection whatever to the reserve.

Mr. B. D. Nieding. Superintendent of the Niblack Copper Co., one of the largest and most successful mines on the reserve. Mr. Nieding approved of the policy of the reserve, but objected to paying for timber cut on an unpatented claim for use on a claim not connected with the group upon which the timber was cut. That was his only complaint.

Mr. B. A. Eardley. Owner and operator of gold mine properties at Dolomi. Mr. Eardley said he had no objection to the forest reserve, nor was he particularly strong in its favor. He believed some law should be obtained so that title could be had for manufacturing sites and home lots, without cultivation, within the reserves(this is also discussed later on).

Mr. Raymond, the merchant at Dolomi, was opposed to the reserve because he thought it must interfere with the settling up of the country. It interfered with town development.

Mrs. A. E. King. Owner of the salmon saltery at Sunnyside, in Chumly Sound. Mrs. King's complaint rests entirely on the matter



6.

of her not being able to get title to the land occupied by her saltery and home, because the manufacturing site law does not apply on reserves. Her complaint is a good one, but due to a faulty law rather than to the reserve. She is now satisfied to take out a lease and await an amendment in the law.

Mr. Charles A. Sulzer, Superintendent of the Alaska Industrial Company's mining operations at Sulzer.

Mr. Sulzer stated to me that he believed in the principle of forest reserves but objected to delays in doing business which seemed to accompany them. A part of his delay was due to a misunderstanding of the terms of his contract, a part to his own negligence, and a part to the difficulties of administration.

Mr. Andrew Miller. In charge of the Northwest Fishery's Cannery at Hunter Bay. Mr. Miller said he had had no trouble with the reserve. He was not sure whether he had to pay for drift-wood.

Mr. Ferguson, of Grace Harbor, was in Washington last year and explained his troubles. His difficulty is simply in not being able to get title to land for a saltery and fertilizer plant. During our call upon him he took out a lease for the land and expressed the hope that the law would soon be amended. Outside of this matter he made no complaint.

Mr. Frank W. Hale. Resident Manager of the Alaska Copper Company, at Coppermount. Mr. Hale complained of the delays connected with the purchase and scaling of timber. He thought they were serious and should be remedied. With this exception he thought the principle of the reserve was all right and that any company beyond the pioneer stage should pay for its timber. This Company is one of the largest working concerns on the reserve.

Its President, Mr. H. W. Mellen, was in Nome at the time of my visit and I failed to meet him later on. He was the democratic candidate for delegate to Congress, and defeated at the recent election. I understand he is decidedly opposed to the reserve from all standpoints. He has consistently refused to abide by its laws and regulations and was only brought into line by the seizure of timber at his mill, an action which in my mind was entirely justifiable under the circumstances. Mr. Hale now controls matters and no more trouble may be expected.

Mr. Geo. E. Bent. Part owner and manager of the copper properties at Bruce. He stated that he had had no trouble with the reserve and believed it a good thing.

7.

Mr. Harry Swift. Manager of the Cannery at Klawak (North Pacific Trading and Packing Co.). Mr. Swift said he met delays at first in obtaining timber but that he now has nothing to complain of. He can see no particular object in the reserve as he believes none of the mines will ever amount to much and that most of the timber will never be used.

Col. C. E. Nason. Superintendent of the Alaska Marble Co., at Marble Creek. Col. Nason has no objection to the reserve, although he sees no particular need for it as he looks for no great development in south-east Alaska. He is willing to trust to the judgment of those who know more about it and have made a study of it.

Mr. I. F. Hunt. Manager of the Cannery at Shakan (Shaken Salmon Co., formerly the Alaska Fish and Lumber Co., now in hands of receivers). Mr. Hunt has no difficulty with the reserve. This is the point at which Congressman Tenney proposed setting up a large saw-mill.

Mr. F. D. Brown. Manager of the Cannery at Petersburg (Pacific Coast and Norway Packing Co.). A mill is run here in connection with the cannery. Mr. Brown said he purchased his timber from the public domain entirely. He would not buy from the reserve because there was too much red tape and because he had to pay thirty cents more per thousand than on the main-land.

Mr. S. L. Hogue. Merchant at Petersburg. Mr. Hogue objected to the reserve because it kept back settlement and because there was too much delay and red tape. He believed in the principle of keeping the timber in the hands of the government.

Mr. E. V. N. Snyder and Mr. Geo. Snyder, owners of the "Sentinel" at Wrangell. They have vigorously opposed the reserve in their paper, largely for the reason that they understood that no timber whatever could be cut upon it and that it was closed to all kinds of entries. After a better understanding of the matter they could offer no reasonable objection.

Mr. W. J. Thomas. Ex U. S. Commissioner at Wrangell. Mr. Thomas objected to the reserve on two grounds; first, that the expense of maintaining it was not justified and was an unjust tax on the people. He believed no reserve was needed now because the laws were such that the timber could not be monopolized anyway. If there was danger of this later on a reserve could then be made and the expense would then be all right; and secondly, that there was not enough timber on the reserve to call for a regular administration. He believed the government should set a stumpage price on all timber and let it be logged and settled for according to the mill



8.

cuts. No forest officers are needed as the Commissioners could tend to the business in connection with their other duties.

Mr. W. D. Grant. Depy. U. S. Marshall at Wrangell.

Thought it was foolish not to allow any timber to be cut on the reserve and believed the mature timber ought to be taken out to give the young stuff a chance. When informed that that is what we are doing he thought the reserve was a good thing.

At Hadley I missed Mr. Parker, Superintendent of the Brown Alaska Copper Co., although I had a brief talk with him at Ketchikan. He is apparently opposed to the reserve on account of his failure to obtain patent to certain lands occupied by the smelter and other buildings. They were entered as mineral claims and Mr. Langille's report recommended that patent be not granted because of no mineral discovery and no assessment work. This was quite right. They should have been entered as manufacturing sites, as originally intended. This is not the fault of the reserve. (The subject is discussed below).

Mr. William C. Freeburn. Superintendent of the copper mines at Mt. Andrew (Brittania Copper Co. of British Columbia). Mr. Freeburn had no complaints whatever about the reserve.

Mrs. Wyman, who is the active personage in the management of her husband's copper properties at Copper City, objected to the whole reserve business on general principles. She thought the mines ought to have free timber whenever and wherever they wanted it and that the reserve was in general nothing but foolishness.

Mr. Coutant, of the "Mining Journal", Ketchikan, is very favorable toward the reserve. His father was formerly in the newspaper business in Wyoming.

Mr. Kinzie, Superintendent of the Alaska Treadwell Gold Mining Co. (the largest mine in Alaska and the largest stamp mill in the world) said he had rather have a forest reserve to purchase from than to buy from the public domain and expressed himself very favorably toward the reserve policy.

Mr. James, owner of the saw-mill at Douglass (or rather lessee of this mill, which is owned by the Treadwell Co.) is favorable to the reserve policy and would prefer to purchase his timber from reserve lands. He cuts all the lumber used by the Treadwell company.

8.

Hon. W. B. Hoggatt, Governor of Alaska, was unfortunately at Valdez when I visited Juneau, and I therefor failed to get his views on the subject. I have written him, suggesting that he write the Secretary of Agriculture in regard to the forest reserve situation, so that the Forest Service may have the advantage of his recommendations.

Mr. U. S. Rush, of Kasaan Bay.

Mr. Rush is part owner of the Rush and Brown Copper Mine at Karta Bay (now leased to the Alaska Copper Co.) and is also discoverer of the "Venus" claim, also at the head of Karta Bay. He has been a U. S. Commissioner, and resigned that position (I am told) in order to attend the Republican Convention at Juneau and see that the platform included a plank calling for the abolishment of the present reserve. (It did, as well as the Democratic platform). He wrote The President on October 17, 1905, asking that the reserve be done away with. He may be called the leader of the opposition forces, although only a self-appointed leader.

I had a lengthy talk with Mr. Rush on July 31, and was with him again on August 27. Most of his objections are contained in his letter of October 17, herewith attached, although the real basis of his feeling appears only in his conversations with me and in his several newspaper articles. I discussed his written objections to The President as follows:

1. That there is not enough good timber to justify a reserve.

This is absurd. It is true that the best timber is found in patches only, but from the briefest kind of a look at the reserve

10.

it is clearly evident that there is an immense amount of timber which is either merchantable at present or which soon will be merchantable when the demand increases. A large part of the area is covered with timber which is not at present regarded as merchantable by the mills because it is more or less inaccessible and because under present methods of logging only the very pick of the trees within a few hundred feet of the beach are taken out. For the sake of argument, let us admit that only one-tenth of the reserve supports merchantable timber; even that would give us a total stand of five billion feet, assuming an average of ten thousand per acre, which is very conservative. This, of course, is well worth the cost of administration.

2. That the preservation of the forest is not necessary to insure ample rain fall in this district.

Quite true. The Forest Service never had the idea that it was, nor was it created with any such object in view. Its chief purpose is to keep the timber in the hands of the government for the present and future use of the people. That's the main object of the reserve lands on the west slope of the Cascades in Washington and Oregon.

3. That the country is chiefly valuable for the mineral it contains. Also quite true. The mines must have timber, and this is an argument for, not against, the reserve.

4. That all the available timber will be needed in the development of the resources of the region.

11.

Whether or not this is true, it is no argument against the reserve. If the local demand requires all of it, none will be exported. Local industries can have every stick they apply for. That's what the reserve is for.

5. That the use of the timber and occupancy of the ground should not only be a privilege but a right, etc.

By this I find that Mr. Rush means that he objects to anyone, from the Secretary down, having the authority to approve or disapprove the sale of timber or other use of reserve lands and resources. He would take away all discretionary powers and have use of all kinds fixed by statute; by hard and fast law.

In his conversations he brought this out more clearly. For example, he considered the Secretary's statement on page 17 of the "Use Book" a very excellent one, but was much concerned lest the forest officers should fail to carry out the principles there laid down. He pointed out that under Reg. 5 the Forester might grant privileges for the use of the reserve, but that it was wholly at his pleasure; that under Reg. 10 the Officer In Charge had authority to decide who was entitled to the free use of timber, and that here was a possibility that the officer might decide unjustly; that the privilege to purchase timber depended very largely on the pleasure of the Officer in Charge or upon his recommendations to the Forester, and that here was a possibility that grave injustice might be done. He called attention to the fact that the Secretary

12.

was empowered, at his pleasure, to sell all the timber on the Alexander Forest Reserve, at one time and to one purchaser, and to allow its export out of the District; that no one in the Forest Service was capable of deciding what restrictions were necessary for the cutting of timber; that a prospector who cut brush in order to work his way to the top of a ridge would be classed as a trespasser, and that a man shiprecked on the beach who built himself a fire without first getting a permit for the wood was really a trespasser and might technically be prosecuted by an unjust forest officer. He is, in short, very much concerned over the grave injustice of all kinds which might arise from this discretionary power and as a remedy would have all these details fixed by hard and fast statutes. He asked me how I would feel in case I were dependent on the "whims and fancies" of the local officer in all these little matters. I replied that I should be inclined to place a little more confidence in the integrity and common sense of that local officer; whereupon he replied that he had seen a good deal of federal officials in Alaska and preferred not to do so. I inquired whether he had had any trouble with the reserve himself or whether it had handicapped his work at all. He said he had had no difficulty at all and that his operations had not been interfered with. ~~He stated~~ He stated to me that in the matter of getting a permit to build a trail to the "Venus" claim he had purposely carried through his application so that it would meet with all possible delays and form a very intricate



12. A.

mass of detailed correspondence. (He had verbal permission from the officer in charge at the very beginning to go ahead and build his trail).

He has worked himself into a very serious state of suspense for fear that all these discretionary powers will be unjustly and unwisely used. He has'nt the slightest confidence in any officer of the Forest Service, from the Secretary down.

Toward the end of my conversation with him on August 27<sup>th</sup> he remarked that he believed I had come out to Alaska with the preconceived idea of trying to convince the people that the present regulations were all that could be desired and that I had no intention of giving serious consideration to any complaints which might be made. He also took occasion to remark that the Department of Agriculture had built up a great and wonderfully strong system of forest management, and one which was perfectly constructed for the intrusion of graft.

Upon this the small amount of self control which still remained with me gave out and I at once refused to discuss the forest reserve question with him any further.

Mr. Rush is one of that very small minority which believes that discretionary powers are for monarchs and princes and not for the ordinary type of man. Neither the Secretary nor anybody else has any right to have a policy; all these things ought to be laid down by statute. As I understand it the object (not to say policy)



13.

of the Forest Service is to make things just as elastic as possible so that the many varied conditions can be met and dealt with locally by men on the ground; and I also believe that a good deal of confidence is placed in these men. Which in my mind is all very wise. So much for objection No. 5.

6. The inability to secure title to ground, other than through permit, retards development, etc.

This would be so if it were true. As a matter of fact every single one of the land laws of Alaska, except that which applies to trading and manufacturing sites, may now be applied to forest reserve lands and patent obtained. The manufacturing site law should also be extended to the forest reserve, and recommendations to this effect are made below.

7. ~~That~~ the rules and regulations governing forest reserves, when applied to that section, are unjust and impracticable.

Here is an objection based upon common sense. Conditions in Alaska are peculiar and I believe that many of the present regulations are unnecessarily strict and that they should be modified to suit conditions. I may also add that in my mind it is a most excellent thing, just in this connection, that the Secretary and other officers have a good deal of discretionary power and that it is a very simple matter, under these circumstances, to slightly modify the regulations and remove all the trouble.

14.

From a review of the various points of objection and the general sentiment expressed above it will be seen that opposition to the reserve comes first from ignorance and misunderstanding, which are not good grounds of objection; secondly, from the feeling that some of the regulations are unnecessarily strict, which is a good ground of objection and which can be easily met simply by modifying certain of the regulations to meet local conditions; and thirdly from the belief that the whole principle underlying all forest reserve legislation is bad, which objection is of course not admitted.

I believe that, with certain modifications in the regulations, the forest reserve policy is an excellent thing for southeast Alaska. Far from recommending any reduction in the present area I shall recommend below that all of the country (with certain exclusions) from Mt. St. Elias to the Portland Canal be proclaimed as a forest reserve.

#### RESERVE ORGANIZATION.

##### Personnel.

W. A. Langille, Forest Inspector In Charge.

Mr. Langille has been in charge of the reserve since June, 1905. In addition to his familiarity with conditions in southeast Alaska he has had a wide experience along the coast to the westward and is also well acquainted with the Nome, Tanana and Yukon districts. His position for the past year has been a very

15.

difficult one, because the sentiment toward the reserve has been similar to what it was in the western states three or four years ago. He has had to contend with just the same opposition, due largely to ignorance and misunderstanding of the objects of the reserve, and besides this has had to meet the universal feeling which still clings on in Alaska to some extent that all laws are pretty much out of place "north of forty-three" and that the people should be left alone to do as they like. I believe that the "pioneer" plea is somewhat unduly cherished in south-east Alaska and that the industry and energy of the people have already lifted the country out of that stage in a great many ways. The towns and many of the mining camps show a development much ahead of similar localities in the western states, enjoying water systems, steam heat, electric lights and even curfew bells. It is true, however, that the population is exceedingly light and scattered.

Mr. Langille has been criticised for his unfavorable reports on mining claims, for certain rather vigorous actions connected with timber sales and for a somewhat peremptory course in regard to special privileges.

I have carefully looked up his reports on mining claims and believe them to be just in every way. The difficulty arises from the fact that the mining laws were not complied with and Mr. Langille so reported. To put it plainly, and to touch upon a delicate subject, the Deputy Mineral Surveyors made reports which were not

16.

in accord with the facts and the Local Land Office took favorable action on these reports. Mr. Langille reported actual conditions and upon his recommendations the General Land Office refused patent. In most of these cases it was desired to secure lands for purposes other than that contemplated by the law under which the entries were made. I believe that Mr. Langille has acted with fairness in these matters and that there is no ground for criticism.

In timber matters the chief complaints come from the Alaska Copper Company and The Wilson and Sylvester Estate at Wrangell. In the former case logs were seized at the mill, which shut down operations for the time being. This was pretty strong action and might possibly have been avoided. It must be born in mind, however, that Mr. Mellen, the President of this company, had persistently refused to pay any attention to Mr. Langille's frequent requests for a very simple compliance with the forest reserve law and regulations. I believe that strong and decided action was necessary in order to convince this company that a certain respect for law and the officers of the Forest Service were matters not to be overlooked, and that Mr. Langille's action was quite justified.

There can be no question but that his action at the Wrangell mill was quite proper. The company wholly denied knowing where the logs came from, although it was quite evident where they did come from. If the officers had made a frank statement of the matter at first much unpleasantness would have been avoided.

17.

Other complaints about the timber business relate to delays in applications and scaling. These complaints are good. There were delays. The fault, however, lies not with Mr. Langille but with the difficulties of administration and utter lack of suitable transportation facilities. This matter is fully discussed under "Equipment".

During the early part of Mr. Langille's administration I believe that his tone toward certain users of the reserve was unnecessarily harsh; but in certain cases only. To show what I mean are the following quotations from two of his letters:

To G. Gerth, of Dolomi:

".....if located since the reserve was created you are a trespasser and liable for damages as well as criminal prosecution, and no permit will be issued you to erect other structures on the public domain....."

(The above to a man asking for a permit to put up a house and, I believe, lease some land).

To S. J. Goodro, Dolomi.

".....If it is since the reserve was created, and not on a mineral claim, you are a trespasser and no permit will be issued you....."

Of course as a matter of fact there was nothing technically wrong in these letters; both men could probably have been regarded as trespassers in the strict sense of the word. On the other hand they were quite harmless and there was absolutely no reason for addressing them in any such severe tone. They naturally became enemies of the reserve at once, and made it other enemies.



18.

I am convinced that Mr. Langille did not realize the harm done in such little ways as this. At bottom he is absolutely lenient and disposed to make every possible allowance to those doing business on the reserve. He is naturally so constituted as to appear, on the outside, as if he delighted in riding rough shod over those he comes in contact with, and I surmise that his abrupt, outspoken and occasionally mildly terrifying manner may possibly account for the trepidation of one or two of the feminine property holders on the reserve. It is fair to say that his tone in these little matters has recently been much modified.

I believe that essentially he uses strong measures when he should use them and is lenient when he should be so. In my mind his administration as a whole has been an excellent one and I believe he is a first rate man for the place. In fact I don't believe a better one could be found.

His salary is now \$1800.00 and his traveling and living expenses are reimbursed the year through. Under the circumstances it seems best to continue these expenses. He is not in the position of the ordinary Supervisor for he has, or at least soon will have, almost continuous travel with heavy expenses which he can not properly be called upon to pay himself.

I recommend that he be commended for his excellent work as Officer In Charge, that he be cautioned about the tone of his letters, and that he be promoted to a salary of \$2000.00.



19.

In connection with this promotion it should be borne in mind that in case the recommendations of this report are approved Mr. Langille will have practically all of south-east Alaska under his supervision, an estimated area of 16,000,000 acres.

Richard Dorwaldt, Assistant Forest Ranger.

During my visit Mr. Dorwaldt resigned, at Mr. Langille's request, so that no extended remarks about him are necessary. He was simply a general misfit and an impossible man for ranger. He had a faculty for rubbing people the wrong way on every possible occasion, and without excuse. I believe he was conscientious and meant well but missed his calling. A couple of his letters are attached which partly bring out his peculiarities. He was once upon a time in the Navy; in his affray with the boat load of Kake Indians, please notice that the canoe was "heaved to, broadside on". (Apparently only one ~~of the~~ the starboard battery was brought into action).

#### Executive Force.

The proper administration of this reserve, and of the proposed enlarged reserve, hangs entirely on the matter of transportation, rather than on the number of men in the executive force. I can not too strongly emphasize this point. If a hundred men were on duty it wouldn't help matters any. Remember that if a ranger is set down upon ~~one~~ of the islands of the reserve he is without a

20.

horse, that there are no roads or trails and that, for all practical purposes, he can not move even a few miles across country on foot. The sea takes the place of roads and trails, and a host of saddle and pack animals. Storms are frequent, currents are swift and distances are great, so that small boats are almost useless. Also consider that the points at which there is any reserve business are very few and very far between. It will then be understood that the need is for one or two good men only, so equipped in the way of boats that they can move rapidly, at all times, from one point to another. These one or two men, moreover, must be of a higher grade than rangers. They themselves must tend to most all of the business in their territory, in many cases without consulting the Officer In Charge. They have none of the ordinary ranger duty of those officers in the States; no road or trail building, no fire patrol or fire-fighting and no stock to look after. Their chief duties are to sell timber, scale logs and report on mining claims, (together with a good deal of special privilege business) and they must be able to do all these things well and without help.

Not Rangers, but Deputy Supervisors, are needed.

For the present reserve, one Deputy Supervisor is enough. He should be stationed at some convenient point on the west shore of Prince of Wales Island. A fit man can not be obtained for less than \$1500.00 a year(living expenses not to be paid).

If the reserve is enlarged as recommended an additional Deputy Supervisor will be required, with headquarters at or near Juneau, to take

21.

care of the northern division. His salary should also be \$1500.00. Examinations for these men and the nature of their equipment will be discussed later on.

### Equipment.

In my mind the Officer In Charge must have a boat. I believe an efficient administration is impossible without it. Without a boat he is in precisely the same position as a Supervisor without a saddle horse, on a reserve without railroads, telegraph or telephone lines, dependent for transportation on the voyage of a weekly stage touching only at a few points on the outskirts of his reserve. Nor can his men get to him or communicate with him any more than he can reach them. The regular mail and passenger boats make weekly and sometimes bi-weekly trips to a few of the largest camps on the reserve, but they are of very little help. Suppose he reaches one of these camps, he is no better off than before, because his business is most often at some other neighboring point which it is impossible to reach without a boat. So he must take his chances and get there when and how he can. Moreover, if dependent on the regular boat, he must wait a week for its return trip, although his business may have been finished up in a few hours.

He must have a boat which is seaworthy and which can go anywhere in ordinary weather. This boat should ~~be~~ his office. It should contain a full office equipment, ready for him to do business of all

32.

kinds right on the spot, wherever he goes. He should be on the move with it almost constantly. Unless it is possible to furnish him with such a boat I do not recommend any addition to the reserve area in Alaska. And more than this, I am convinced that without it the present very serious delays in doing business can not be remedied, and that the administration of the present reserve will be more or less of a failure. The boat business is the crucial thing; upon it hangs the success or failure of the forest reserve policy in Alaska. Spike the supervisors of the Sierra Reserve to a rock at the top of Mt. Whitney and instruct them to run the reserve; that's the position of the officer in Alaska without a boat.

The cost of a suitable boat, built for the Forest Service, may be figured as follows:

Dimensions:

60 ft. overall, 11 ft. beam. Draft 5 ft.  
20 tons measurement.

Specifications:

Oak ribs; outside planking in. vertical grain red fir; inside planking, 1 and 1/4 in. fir; deck, 1 and 1/2 in. tongue and groove; keel, engine bed, cabin and pilot house, red fir; dead-lights in cabin; pullman berths; toilet, water and gasoline tanks built in; stove, cook outfit, table and dishes; mast, sloop rig; compass, anchors, anchor lines, side and mast lights;  
Speed, 12 miles.

Approximate cost of hull and fittings (exclusive of engine) .. \$4,000.00  
Engine: 40 horse power "Union," 2 cylinder, 4 cycle, ..... 3,150.00  
Total cost ..... \$7,150.00

25.

There is a chance that a suitable boat can be found already built. If so its cost would probably be somewhat below the cost of a new boat. This matter should therefore be looked into at the very beginning.

I recommend that Mr. Langille be instructed at once to thoroughly examine all launches for sale in the Puget Sound region and report as to whether one suited to his work may be obtained at a reasonable price, and at what price. In case such a boat is found, I recommend that it be purchased at once.

If a suitable boat can not be purchased, I recommend that one be built for the Service, not to exceed the cost mentioned above, at such a ship yard and according to such contract as may be recommended by Mr. Langille.

The above will be the boat of the Officer In Charge, and his office. In addition to this, the two Deputy Supervisors must each have a boat. Without boats their services would be useless. It is likely that suitable boats for these officers can be purchased, ready built, in Alaska. The Deputy Supervisors must live on them most of the time and they must also serve as their offices. Headquarters in cabins or tents are out of the question. The boats should be in the nature of auxiliary yawls and should cost about \$1500.00 each.

I recommend that Mr. Langille be instructed to keep a watch out for such boats, and that they be purchased as soon as the Deputy Supervisors are appointed.

#### Expenses and Receipts.

The allotment recommended for this enlarged reserve may seem rather large, in consideration of the business done. The cost

24.

of an efficient administration, an administration which can be turned promptly, is given in detail below. And in order to show that it is worth while a statement of estimated expenses is given.

#### Expenses.

1 Officer in Charge at \$2,000 . . . . . \$2,000.  
2 Deputy Supervisors at \$1,500 . . . . . 3,000.

#### Inspector's Boat:

1 Engineer at \$1,000 . . . . . 1,000.  
1 Cook at \$500 . . . . . 500.

Subsistence on boat for Engineer, Cook and  
Inspector (boat to be repaired as a camp party;  
\$500 per month . . . . . 6,000.

Maintenance: Gasoline, 10 cents per gallon, 5  
gallons per hour, 10 hours per day for 300 days  
per year . . . . . 1,500.  
Incidentals, repairs, etc. . . . . 500.

#### Deputy Supervisor's Boats:

Maintenance: Gasoline, 10 cents per gallon,  
5 gallons per hour, 10 hours per day for  
300 days per year, each boat \$1,000 . . . . . 1,000.  
Incidentals and repairs. . . . . 500.

Office rent, light and heat, Ketchikan, . . . . . 350.00

\$11,400.

This total is a little more than twice the allotment now made for the existing reserve of , , acres. In considering this amount it should be borne in mind that the new reserve will have an acreage of 16,000,000 acres there are no expenses for roads, trails, cabins or telephone lines and that there is practically no expense for "protection", as a ranger force is absolutely unnecessary. Instead of money going into these things it goes into



25.

transportation, in other words, boats. The expense figures out about 7/10 cents per acre, which is very low.

#### Receipts.

During the fiscal year 1906-1907 receipts from the Alexander Forest Reserve amounted to \$2,330.00. It is fair to assume that they will be at least equal to that sum next year; and as a matter of fact probably a good deal more timber will be sold. After consulting the records a conservative estimate places the total mill cut in south-east Alaska (from logs taken from the unreserved public domain) at approximately 12,000,000 feet. In addition to this there is used annually about 300,000 lineal feet of piling and approximately 5,000 cords of wood. These figures are based upon very incomplete records and the actual consumption is doubtless a good deal more. With an area three times that of the present reserve the returns from special privileges should be at least three times as great.

Receipts from present reserve... ..\$2,330.00

#### Receipts from addition:

12,000,000 ft. @ 50 cents.....	6,000.00
300,000 lineal feet @ .05 cents.....	1,500.00
5,000 cords @ 12 and 1 1/2 cents.....	625.00
Special Privileges.. ..	1,500.00

---

\$12,955.00

26.

The receipts, therefore, will exceed the expenditures by a comfortable margin.

The initial expense connected with the purchase of boats is not included in these estimates. In regard to this it is simply necessary to consider that the amount allowed for transportation this year on the present reserve (\$1,200) would entirely pay for the Inspectors boat in a little more than four years.

The salary of the present "Gessler" is also omitted because his services will be unnecessary as soon as a Deputy Supervisor is appointed.

#### Civil Service Examination.

Neither of the two men who took the ranger examination last summer are in any way suited to be forest officers. Besides, this reserve does not need any rangers, nor can suitable men be obtained who will accept work at rangers salaries. An examination for Deputy Supervisors should be held at once and notice should be given that the salaries will be \$2,500 per annum.

A special paper should be prepared, as questions good for the western states are not at all applicable in Alaska. Questions relating to boat navigation should form a chief part of the paper and to these should be added questions in lumbering, sawmill business, land law and mining law. Questions on matters should be entirely eliminated. Mr. Langille will submit at once suggestions for the

27.

examination in seamanship. In Alaska this matter is just as essential as horsemanship in the States; the boat is the ranger's horse and he must navigate the sea instead of following trails and roads. The examination should be held at once.

### Fire.

Danger from fire is so very slight that it may be disregarded. It is only in very dry spells that fires occur at all and then they are confined almost entirely to the "muskeg" lands where the timber is scrubby and of hardly any merchantable value. The almost incessant rain is the best kind of fire protection.

Roads, trails and cabins are lacking (speaking broadly) nor are any needed at present.

Boundary lines are the shore lines, and hence quite plainly marked. The proclamation which created the present reserve is however quite vague as to just what islands are included on the eastern side. It mentions certain large islands by name and includes "all islands to seaward". That is plain so far as the western boundary goes, but what about all the little islands just off the eastern coasts of the various large islands? According to a strict reading of the proclamation they are not included, although they certainly should be within the reserve. If the proposed addition is made this matter will be remedied; if it is not made, I suggest that the present boundary be amended in accordance with recommends-

tions which Mr. Lenoir will submit if called upon.

Special Circular For Alaska.

I have already suggested to the Forester that a concise and very brief publication be gotten out to contain a statement of what the forest reserves are for and a summary of the more important regulations only. It would take the place of the Use Book for general public information, my idea being that the Use Book is now altogether too detailed and confusing for the average man of business who wants to know what the reserves mean and how he can do business on them. For example, if a man wants to know whether or not he can buy some timber, of what use to him is all the detailed information on pages 7 to 35 of the Use Book? A good part of this consists of instructions to the forest officer telling him how he shall sell timber. All the intending purchaser wants to know is that we shall be glad to sell him timber, sell it promptly, at a reasonable price and under commonsense rules. Then he can apply to the Supervisor for detailed information. I believe we are making the mistake of assuming that everybody knows just what can be done on the reserves; as a matter of fact it was struck me pretty clearly of late that the average business man is still very much in the dark about it all and that a brief business statement (it might be called) if widely circulated among business men would help out immensely. I am also beginning to believe that the Use Book contains so much that it tends, quite often, to scare people off.

23.

Along this same line, I saw the Weyerhaeuser people here in Tacoma a couple of months ago and they were much surprised to learn that we were selling timber from the reserves in the northwest. They asked me to reply to in case they wanted to buy.

At any rate a special circular for Alaska is absolutely essential. A large part of the Use Book does not apply in that region at all and serves only to confuse the people and give them misleading ideas. This report, under appropriate headings, contains recommendations for many changes in the regulations as applied to Alaska. I believe it would be an excellent scheme to get out a brief publication containing a summary of all regulations for that District, as well as a concise statement explaining just what the objects of the reserve are in that region. The people there now believe that it is made to withdraw the resources from use, to protect the water supply and increase the rainfall, and to control the range (where there is no stock).

If it is thought best to do this, I suggest that Mr. Langille and myself be allowed to look over the manuscript before it is published.

Extension of the reserve area.

As a discussion of this subject involves a consideration of the public land laws in Alaska, as well as the general policy of the government in the management of all its timberlands, it might be well for the Sections of Law and Reserve Boundaries to cooperate in the matters mentioned below.

That portion of south-east Alaska not now included within the reserve is of precisely the same nature, both in respect to timber and economic conditions, as the portion reserved. In order to give a clear insight into present conditions an outline of the policy now followed by the General Land Office in the disposal of timber on the public domain is essential. It is briefly this. The logger or sawmill man goes wherever he chooses and cuts whatever he wants, without permission from anyone and without notifying any official of his doings. Once a year each mill is visited by the Special Agent who inquires as to the amount of its cut. An innocent trespass case is then made out against the owner who settles (if he does settle) on the basis of the lumber sawed. As a rule the amount reported to the authorities for payment of the statutory license fee of 10 cents per thousand feet is accepted as a basis for the stumpage charge. In south-east Alaska the General Land Office collects 20 cents per thousand for saw timber, one-half cent per foot for piling and 15 cents per cord for wood. Every



31.

bit of timber and wood cut from the public domain is settled for as a trespass only. Each and every settler sawing such timber is classed as a trespasser. He can obtain timber from the public domain in no other way. As one of them expressed it to me, they are all "innocent thieves". Moreover, they have no assurance whatever that this matter will continue to be looked upon as an innocent trespass and settlement allowed as such. The price may be raised at any time. It is also difficult for me to see how the General Land Office can continue to settle these matters as innocent trespasses; it may be all very well for the first offense, but how about the second time? All the mills cut from the public domain year after year. Are they "innocent" trespassers when they come to make the second settlement? When the second case comes up how can the General Land Office avoid the Supreme Court decision (printed on all of its trespass forms) to the effect that a willful trespass must be settled for on the basis of the manufactured product? Is'nt it altogether wrong for the United States to be in such a position that it can not dispose of a stick of timber (and be paid for it) from the public domain in Alaska without classing the users as trespassers, even if they are called "innocent thieves"? Is'nt it a rather unbusiness-like procedure?

In this connection I should like to quote the 11th Section of the Act of May 14, 1890, in Supplement, chapter 220, page 788:

"That the Secretary of the Interior, under such rules and

35.

regulations as he may prescribe, may cause to be appraised the timber or any part thereof upon public lands in the District of Alaska, and may from time to time sell so much thereof as he may deem proper for not less than the appraised value thereof, in such quantities to each purchaser as he shall prescribe, to be used in the District of Alaska, but not for export therefrom.

And such sales shall at all times be limited to actual necessities for consumption in the District from year to year, and payments for such timber shall be made to the receiver of public moneys of the local land office of the land district in which said timber may be sold, under such rules and regulations as the Secretary of the Interior may prescribe, and the moneys arising therefrom shall be accounted for by the receiver of such office to the Commissioner of the General Land Office, in a separate account, and shall be covered into the Treasury.

The Secretary of the Interior may permit, under regulations to be prescribed by him, the use of timber found upon the public lands in said District of Alaska by actual settlers, residents, individual miners, and prospectors for minerals, for firewood, fencing, buildings, mining, prospecting, and for domestic purposes, as may actually be needed by such persons for such purposes.

This looks to me like a remarkably simple and also a very broad law. Under this law the Secretary made the following regulations for the sale of timber: (Circular of Jan. 17, 1898, Genl. Land Office).

While sales of timber are optional, and the Secretary of the Interior may exercise his discretion at all times as to the necessity or advisability of any sale, petitions from responsible persons for the sale of timber in particular localities will be received by this Department for consideration.

Such petitions must describe the land upon which the timber stands, as definitely as possible by natural land marks; the character of the country, whether rough, steep or mountainous, agricultural or mineral, or valuable chiefly for its forest growth; and state whether or not the removal of the timber would injuriously affect the public interests. If any of the timber is dead, estimate the quantity in feet, board measure, with the value, and state whether killed by fire or other cause. Of the live timber, state the different kinds and estimate the quantity of each kind in trees per acre. Estimate the average diameter of each kind of timber, and estimate the number of trees of each kind per acre above the average

53.

diameter. State the number of trees of each kind it is desired to have offered for sale, with an estimate of the number of feet, board measure, therein, and an estimate of the value of the timber as it stands.

Before any timbers authorized the timber will be examined and appraised. Notice thereof will be given by publication by the Commissioner of the General Land Office.

The time and place of filing bids and other information for a correct understanding of the terms of each sale will be given by published notices or otherwise. Timber is not to be sold for less than the appraised value. The Commissioner of the General Land Office must approve all sales, and he may make allotment of quantity to any bidder or bidders if he deems proper. The right is also reserved to reject any or all bids. A reasonable cash deposit, to accompany each bid, will be required.

(The rest of the regulations relate to payments, supervision, and restrictions as to the free use clause, and need not here be quoted).

Since the passage of this Act in 1898 not a stick of timber in Alaska has ever been sold under its provisions(at least so far as I can discover.

The trouble is that the above regulations are absolutely impracticable as applied to Alaskan conditions; they have the effect of making the law null and void. The information called for in the petitions from those who wish to purchase timber could be obtained only at such an expenditure of time and money as to make the practical application of this law simply out of the question. After all this the timber must be examined and appraised, by which time the mill would probably be out of business.

In discussing the method of disposing of timber on the unreserved public domain in Alaska I have aimed simply to show that in my mind it is a very unfortunate method. I can not avoid this subject. The only object of a forest reserve in south-east Alaska

34.

is to keep the timber in the hands of the government for the use of the people, and especially to provide for machinery which will dispose of the timber promptly and in a business-like way to those who apply for it. If these objects were already accomplished in the disposal of timber on the unreserved public domain the necessity of any forest reserve in that region would be very much open to question. On the other hand, if the system on the public domain is unsatisfactory (and I believe it could not be worse) there is certainly a very strong reason for extending the forest reserve to cover all public timberlands in that part of the District.

These remarks are not made in the spirit of criticism against any branch of the government service; actual conditions are discussed as they appear to me with the sole object of showing that the general situation is badly in need of improvement and that this improvement can be brought about through an extension of the forest reserve system.

As already stated the lands of south-east Alaska not included within the present reserve are in every way similar to the reserve lands. They have been described in detail and mapped by Mr. Langille in his report on the proposed Panhandle addition to the present reserve. Before including them in the reserve it is necessary to consider two things only; first, whether timber can be disposed of promptly and without red tape; and secondly, whether the forest

55.

reserve laws and regulations will in any way interfere with the developement of the country.

With the modifications of the regulations recommended below I am convinced that there is absolutely no question as to the ability of the Forest Service to handle the timber business promptly and to the satisfaction of all purchasers.

Forest reserve laws and regulations will not interfere with legitimate developement, because the use and also the ownership of lands under patent is now, for all practical purposes, just as open and unrestricted within a reserve as on the public domain. If the Trading and Manufacturing Site law in Alaska is extended to forest reserves (as it should be) the reserve lands will be as open of as the public domain to all kinds use and patent under the Alaskan land laws. It must be frankly admitted that there will be this difference, however; applications for patent and the use of lands will be examined into and reported upon by officers of the Forest Service, which is not the case on the public domain. I can see no objection to this whatever, although as I have mentioned above it is the cause of grave apprehensions in certain minds.

Generally speaking, there is no agricultural land in south-east Alaska. Since the homestead law was made to apply there there has been just one patent granted under it. Little patches of garden vegetables and berries are occasionally found and cultivation of



36.

this description, covering usually but a fraction of an acre, will doubtless continue to increase. A forest reserve would not interfere with this in the least; it would be the policy to encourage it. Agriculture on any extended scale is out of the question, and always will be, for the simple reasons that there is no soil and the growing season is too short. In a talk with the Register of the Land Office at Juneau I learned that numerous locations under the Homestead Law had <sup>been</sup> recorded with the various U. S. Commissioners. According to the law, entries are not made at the Land Office until the claims come up for final proof (which may not be for seven years). He informed me that so far as he knew these locations were invariably made on timber lands, for the sake of the timber, and would be rejected when they came up for final proof.

An important point in the present situation, where reserved and unreserved forests lie side by side, is the fact that saw timber on the reserve is charged for at the rate of 50 cents a thousand feet, whereas just across the channel on the public domain precisely the same kind of timber may be procured for a settlement of 20 cents. This is absurd, unless it is the policy of the government to give away its timber on the public domain. Timber is worth 50 cents, and more, beyond the shadow of a doubt. When the Special Agent came to south-east Alaska there was already an established price of 50 cents on the reserve, but he tells me he thought best to make all



37.

settlements at 20 cents because owing to the very uncertain laws he had to back him up it was extremely doubtful whether he could have induced the mill men to settle at a higher rate. He had to approach them very delicately to get even that. All of which I believe is quite true, and which is another absurdity in the present situation.

The Timber and Stone law does not apply to Alaska, nor is there any way in which title may be obtained to timber lands(except by using Soldiers Additional Homestead Scrip, which is too expensive). Hence there is no present danger of large bodies of timber falling into the hands of corporate interests. I am inclined to think, however, that in the not very distant future timber conditions in the Puget Sound region will have changed to such an extent that the big timber corporations will think it worth while to have a look at south-east Alaska with a view to possible speculative investments in that region; and in that event there would be a hard fight waged for such changes in the timber laws as would allow title to pass to private ownership. If the establishment of additional forest reserves is postponed any considerable length of time it is possible that determined opposition from these interests might then be met with.

The present reserve can not be enlarged without calling forth

30.

much unfavorable sentiment; there is no question about that. At the same time the opposition will come wholly from those who are uninformed or misinformed on the subject, from those who merely imagine their interests will suffer, or from those who object to the government exercising any control in the timber business. Forest Reserves have been created in the western states (in many instances) in the face of just such opposition; and after the lapse of a year or two the sentiment has turned about and become so strong in their favor that it would now be a very difficult matter to abolish them. It will come about just so in Alaska.

I therefor recommend that all that part of south-east Alaska bounded by the inter-national boundary on the south, east and north, and by the 141st meridian and the open sea on the west, be proclaimed as a Forest Reserve, or better as a National Forest; provided that the Officer in Charge and the Deputy Supervisors can be furnished with suitable boats, as recommended above; and provided also that action be not taken on this matter until recommendations are submitted for certain exclusions within this area surrounding the principal towns and settlements.

It seems desirable to exclude certain areas in the vicinity of the towns, and recommendations to this effect are now in preparation. It is a very difficult matter to describe such exclusions, because the whole country is unsurveyed; hence the delay.

39.

The West Coast and the Interior.

South-east Alaska, the country examined, is but a drop in the bucket. It can hardly be considered a part of the real Alaska, which stretches two thousand miles westward toward Siberia and a thousand miles northward to the Arctic, a country three times the size of California. I can not make definite recommendations as to a forest policy for a region I have not personally visited, but as I had a chance to pick up a good deal of reliable information of various kinds I should like to make some suggestions, merely, which may serve as matters of consideration in connection with any possible future action.

The Forest Service is already in possession of Mr. Langille's reports on timber conditions in the Prince William Sound, Kenai and Nome regions. I am not in a position to add anything of importance. There is no apparent objection to making forest reserves in each of these districts at any time. On the other hand, there seems to be no pressing need of doing so. But very little timber is cut, and the principal objects in making reserves would be to try and control the fires, to get a fair price for what timber was cut, and to hold a certain check on Homestead filings which are now being made, it is reported, in order to gain possession of and cut off the timber (each claim 320 acres). There are several railroads under construction in the Williams Sound and

40.

Kenai regions, which will undoubtedly open things up a good deal. It is questionable whether any of these reserves would pay expenses. If created, there should be a Supervisor at Seward to tend to the Kenai Peninsular, one at Orca to look after the business of the Williams Sound country and one at Council for the Norton Bay and Nome regions. No rangers would be needed. These officers must receive at least \$1500.00 at Orca and Seward and \$1800.00 at Nome. Common wages are a little above these figures. Under any circumstances it would be exceedingly difficult to get men competent and experienced enough to run the business; and more difficult still to keep them. And here again not much of anything could be done without boats(except at Council).

The forests of the Interior present an entirely different problem. In the Tanana and Yukon basins the timber occurs in strips along the streams and scattered promiscuously about over the hills and mountains. It is small and largely scrubby, but of great local value, of course, in connection with the placer workings and buildings. It is so irregularly distributed and so little of the region is really known that it would be impossible to establish reserves without including great areas which should be left outside. Moreover, the innumerable mineral locations would create a constant turmoil in the reserve administration.

41.

Besides this, it is the aim of a forest reserve to keep the land producing timber for future use. Here it is merely a matter of guess-work whether the future will need any timber. The life of the placer industry is variously estimated at from 5 to 50 years, depending upon new discoveries and improved methods. For example, in Fairbanks nobody figures upon real estate having any value after 10 years at the longest, and many believe it will be of little value after 4 or 5 years. The Canadians dispose of their timber with the sole idea that it is of present value only and that it is foolish to provide for a future supply when the whole country is soon to be abandoned. And there is a good deal in this.

The General Land Office makes trespass settlements here in the Interior just as in south-east Alaska, and on the same basis, 20 cents per thousand. In this region common lumber sells at from \$50.00 to \$70.00 per thousand feet, and finished stuff for about \$100.00. The Canadian Government charges not less than \$2.00 per thousand feet stumpage. Although still bearing in mind the fact that the laws under which these trespass settlements are made are far from satisfactory it is nevertheless very difficult for me to believe that the United States must sell its stumpage for 20 cents when common lumber brings from \$50.00 to \$70.00 (unless, as before mentioned, it is the governments policy to give away its timber).

I have not been instructed to report upon the public land



42.

laws of Alaska; but I was instructed to "size up the general situation". This, in my mind, includes the question of the advisability of making forest reserves in the Interior; and I can not discuss this matter without taking into account the methods now applied by the General Land Office in the disposal of timber from the public domain. So I shall go ahead and make a suggestion.

It seems to me that in the Interior, just as in south-east Alaska, it is very poor business for the United States not to be able to sell a stick of timber without making a trespass case out of it. In addition to this it strikes me that it is open to question whether it is worth while to go to the expense of collecting 20 cents a thousand stumpage for lumber selling at \$50.00 to \$70.00. Grant that on account of high wages the expense of logging and manufacture is higher than in south-east Alaska, where common labor is \$3.50 per day. In the Interior lumber is about five times as valuable; but wages and the scale of living are nowhere near five times as high, and I believe the government might just as well give away its timber absolutely as to collect 20 cents.

Forest reserves are impracticable in this region; but why can't the Act of May 14, 1880, be put in working order?(see pages 32, 33 and 34). Are there any legal objections to the following procedure:

Let the Secretary at once appraise all the timber in the Tanana and Yukon watersheds; no examination will be necessary, as



43.

the value of the timber may be determined from the recommendations of men who have already made extensive examinations in the region. One price may be set for the whole district, or two or three different prices may be made for two or three different districts. If desirable, the prices may vary according to species and condition.

Then let the Secretary give public notice of this appraisal and call for bids, stating, at the same time, that after a certain date timber cut from the public domain will be disposed of under this Act only and that innocent trespass settlements will no longer be made. Let the Secretary authorize his agents in Alaska to approve all sales and make allotments of quantity to all bidders, selling the timber as applied for right on the ground (under such arrangements for payments, etc. as the Secretary may make).

It may be objected that the Secretary can not delegate his authority to sell timber; under the regulations he has already made he states---"The Commissioner of the General Land Office must approve all sales, and he may make allotment of quantity to any bidder or bidders if he deems proper." The law reads---"That the Secretary of the Interior.....may from time to time sell so much thereof as he may deem proper, for not less than the appraised value thereof, in such quantities to each bidder as he shall prescribe...." He has therefor already delegated his authority to the Commissioner in the matter of making allotments to purchasers; can he not likewise delegate his authority to an Agent in the field?

Under this arrangement the timber need be applied for according

44.

to general location only (such as a watershed or slope); the approximate amount and kinds desired should be named. No other details are necessary, nor need any restrictions whatever be imposed as to the cutting and removal (except as to the time allowed). The logs could be scaled at the mill or on the ground, or if more desirable payment could be made on the basis of the lumber cut. Cordwood should be appraised separately and scaled and paid for under a separate arrangement.

Three men could tend to the whole business in the Interior; for the Yukon, one at Eagle and one at Circle; for the Tanana, one at Fairbanks.

The chief advantages of this system over the present one would be that timber and wood could be sold outright according to a business-like method, rather than according to a plan in which every user is a trespasser; and the government would get a fair return for its own resources.

If reserves are not made in the Williams Sound, Kenai and Nome regions, (and I am not at all sure that they should be) this plan would undoubtedly bring about a great improvement in those districts also. In fact, how would it do to make it apply to all that part of Alaska not included within the proposed enlarged reserve?

Here is another suggestion; would it be advisable to ask Congress to transfer the execution of this law to the Secretary of Agriculture, with an amendment providing that expenses shall be paid

45.

from, and returns go into the Special Fund?

All the matters referred to under this heading are merely suggestions, not recommendations.

### National Monuments.

Mr. Langille has already recommended the reservation of certain Totem Poles at Tuxikan and Old Kasaan. I believe this is an excellent idea and that totems at other old Indian villages should also be preserved by the Federal Government. It seems much more appropriate to keep these most interesting relics in their natural surroundings than to allow their removal (on any extensive scale) out of the country. If properly looked after they will remain in a good state of preservation for many years. The Indians themselves are fast losing all interest in them and it is probable that they will be destroyed, sold or given away unless steps are taken to look after them right away. As one of the younger and civilized(?) Indians remarked, "No good; old fashioned; cut 'em down pretty soon".

The title to the ground rests with the United States, the Indians having a possessory right only. But the poles themselves are the property of the various clans which lived in the now abandoned villages. Members of these clans, or their descendants, are still living and would undoubtedly claim ownership in the various totems. I believe they would gladly relinquish all claim to them if they are

46.

made to understand that The Gratt white Chief wants to keep them just as they are so long as they will stand. The trouble will come in getting some kind of written consent to this from the very numerous owners. Each family, or each group of families living together in a communal house, had a totem pole in the yard, or near by. So far as I can make out, consent must be obtained from the oldest men of these families for the transfer to the government of each pole.

I recommend that Mr. Langille be instructed to look into this matter and submit recommendations for a definite course of procedure. Also that he be given all possible information as to how to go about it. Perhaps the Office of Indian Affairs can offer some suggestions.

Reserve Organization.

SUMMARY OF RECOMMENDATIONS.

1. That Mr. Langille be commended for his excellent work as Officer In Charge, that he be cautioned about the tone of his letters to those doing business on the reserve, and that he be promoted to a salary of \$2,000.00.
2. That examinations for Deputy Supervisors in Alaska be held at once, at Ketchikan, Wrangell and Juneau; and that a chief part of the examination consist of written questions and practical demonstrations in seamanship (small boat navigation). Also that the paper as a whole be prepared with special regard to Alaskan conditions.
3. That as soon as a list of eligibles is available, one Deputy Supervisor be appointed for the west coast of the present reserve, and one for the northern division of the enlarged reserve, provided the addition recommended is made; the salary of such Deputy Supervisors to be \$1,500.00 each.
4. That a boat, with general specifications as recommended, be at once procured for the Officer In Charge; that this officer be instructed (during his coming leave of absence) to see whether a suitable boat may be purchased ready built in the Puget Sound or Columbia River districts; that in case one is not found, a boat be built for the Service, not to exceed the cost mentioned in this report, at such a ship yard and according to such a contract as may be recommended by Mr. Langille.

That the Service also purchase boats for the two Deputy Supervisors, when appointed, their cost not to exceed \$1,000.00 each, and that Mr. Langille be instructed to look up suitable boats for this purpose and recommend their purchase.

48.

(Summary of recommendations, continued).

5. That in case the reserve is enlarged as recommended, the allotment for 1907-1908 be not less than \$12,000.00, and that this amount be expended substantially as indicated in the detailed estimate.
6. That in case the present reserve is not enlarged, its eastern boundary be more definitely defined in an amended proclamation.
7. That a special circular for Alaska be prepared, explaining briefly the objects of a forest reserve in that District and containing the amended regulations for Alaska, omitting all detailed instructions to forest officers; and that the widest possible circulation be given to this publication.
8. That the Alexander Archipelago Forest Reserve be extended to include all of south-east Alaska, with boundaries as recommended; but only in case the officers are furnished with boats, also as recommended, and action not to be taken until recommendations for certain exclusions are submitted.

That this reservation be proclaimed and known, if practicable, as the "Baranof National Forest" or the "Panhandle National Forest".

("Alexander Archipelago" is much too cumbersome a name, and should be done away with, no matter what the new name may be. The Forester's suggestion that the reserves be called "National Forests" would have an excellent effect in Alaska, where the word "Reserve" creates an immense amount of obnoxious feeling. I believe it would practically do away with all opposition based on ignorance and misinformation).

#### SUMMARY OF SUGGESTIONS.

1. That no immediate action be taken toward the creation of forest reserves in the PrinceWilliam Sound, Kenai Peninsular and Norton Bay regions.



49.

(Summary of Suggestions, continued).

2. That consideration be given to the possibility and desirability of disposing of all timber and wood on the public domain in Alaska(outside of forest reserves) under the Act of May 14, 1898; sales to be made by agents on the ground, without restrictions of any kind(except as to time) as to the cutting and removal.
3. That the possibility and desirability of transferring the execution of this law to the Secretary of Agriculture be considered.
4. That steps be taken to make "National Monuments" of certain Indian villages which contain remarkable specimens of Totem Poles.

Piling, Spruce,	linear feet	1,157,710	
" Hemlock	" "	25,140	
" Red Cedar	" "	6,570	
	Total		1,189,420
Wood, Spruce,	cords	1,104	
" Hemlock	"	553	
	Total		1,657
Stave Bolts, Spruce,	cords	90	90
Value of forest products;			
Sawtimber 11,133,030 feet B.M. @ 50¢		\$5,566.51	
Piling 1,189,420 linear feet @ 1/2¢		5,947.10	
Cordwood 1,657 cords @ 25¢		414.25	
Stave Bolts 90 cords @ 25¢		22.50	\$11,950.36
	Total		

#### SPECIAL USES.

There are 44 operative special uses, on five of these the annual rental has not been paid, and on six others there is no annual charge; the total sum received from this source was \$414.48 for the period January 1, to December 1, 1908, making the aggregate sum from all the Forest resources of Alaska \$12,364.84.

#### INDUSTRIES.

The depression in the price of copper which was coincident with the financial panic of last year seriously effected the operation of the copper properties of this section and resulted in the closing down of practically all of them. All the producing mines were on Prince of Wales Island and the cessation of work made a material difference in the industrial activity of the National Forest.

There was no great activity in prospecting and the only mineral discoveries that have attracted much attention were new